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# MARKETS FOR NORWEGIAN SCALLOPS

(MARKED FOR NORSKE HANESKJELL)

## Conclusions and Proposals for Marketing Strategies

BY

RUNE LINES

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ABSTRACT

The report documents the work performed to survey the competitive situation for a Norwegian scallop industry , and it points out opportunities for this industry to strengthen its position in the markets.

The project work consists of three parts: an internal analysis, a market analysis and a competitive analysis. On the basis of these analyses, proposals are presented for marketing strategies for the Norwegian scallop industry directed towards the most important markets. The results of the internal analysis will be documented separately.

3 KEY WORDS

MARKET ANALYSIS
COMPETITIVE COUNTRIES
MARKETING STRATEGIES.

Translators note:

The word "Haneskjell" is used in this report as a collective word for scallops. Biologically the correct name for haneskjell is Iceland Scallop, *Chlamys islandicus*, and this is the only species harvested and marketed by the Norwegian scallop industry.

## FOREWORD

The present report contains the conclusions of studies on the global markets for Norwegian scallops carried out over a period of more than a year.

The studies were initiated by fisheries officials in Northern Norway, who together with the financiers ( the Regional Committee for Northern Norway and Namdalen, the Regional Development Fund and the Ministry of Fisheries) realized at an early stage the need for a better understanding of the structure and function of the scallop markets.

Even if only one name is listed as the author of this report, it was far from being a one man effort. A number of people have belonged to the project group at one time or another: Finnbogi Balvinsson, a student at the Norwegian University of Fisheries (NFH), Magni Gerisson, also a student at NFH, Berit Hanssen and Roger Richardsen, both researchers at the Institute of Fishery Technology Research (FTFI), and Stud dr. Scient Jorge Santos, NFH have all contributed with analyses of markets and competitors in different parts of the world.

In addition, various individuals and organizations in Norway and abroad have willingly contributed information and knowledge and are hereby thanked for that. A special thank goes to the Export Council for Fresh Fish that placed their market researchers in London, Madrid, New York and Paris at the disposal of the project for the field studies.

Tromsö, 30.06.88

Rune Lines
Project leader

SUMMARY

The report summarizes the principal results of an analysis of the competitive and demand conditions in the scallop markets, and it identifies important purchaser groups and their characteristics. The analysis favors a well-founded choice of target markets and target groups for the marketing of Norwegian scallops. A coordinated strategy for strengthening the position of Norwegian scallops in the market is proposed.

The analysis of the global scallop industry shows that there is intense competition for a limited market. The supplies from each producer nation are strictly guided by the levels of scallop stocks at any time , and the price level in the market is strongly dependent on the total production from all countries added together. The industry is global in that importing nations receive supplies from producers on all continents (except Africa) and exporting nations ship to all markets of any size.

Two conditions still make it possible to develop a marketing strategy for the Norwegian scallop industry. First, the products offered are not perfect substitutes for each other. Biology and production processes result in product differences between scallop variants. These differences mean that the products occupy different places on a multi-dimensional quality scale. The second point is that buyers of scallops are not a homogeneous group. The buyer's own ambitions regarding quality are especially variable. This applies to both the restaurant-, industry-and retail markets.

The biologically determined characteristics of Norwegian scallops and the processing methods used by the Norwegian industry create a product that technically retains a very high quality as compared to most (all?) suppliers in the marked. We therefore conclude that the scallop industry should be able to pursue a strategy where product quality is the principal argument. The strategy is directed towards the segments of the restaurant-, retail- and industrial markets in the USA and Europe that are sensitive to variations in quality.

## 1. INTRODUCTION

In 1987 the Norwegian scallop industry experienced a drop in demand which has radically altered the profitability for the participants. The present report is the result of studies initiated in the early fall of 1986. The situation was at that point characterized by high market prices, and the focus was chiefly on technological and resource problems. For that reason this study has taken a long term perspective view of the demand- and competitive situations.

The approach taken was as follows:

"Which measures can be taken by the Norwegian scallop industry to strengthen its position in the markets?"

A strengthened position in the market has for us meant to reach a position where the industry is less subject to competitive pressure and thereby able to achieve greater stability in sales and higher average prices in the longer term.

The approach has not to any significant degree been affected by the short term problems recently experienced by the industry. Many of the problems are in our opinion caused by overproduction, and increased demand will not change the mode of operation of the market per se. Factors affecting demand are the same, preferences in the various markets will not necessarily change, and competitive factors will probably be quite unaffected by a (temporary) increase in production.

Also, we have not found simple solutions that can turn the market situation around in the short term. "Solutions" can rather be found in the planning and implementation of a series of measures in the near future to create a firmer and more stable demand for Norwegian scallops over the next two or three years.

Norwegian scallops today have a weak position in the very important American market. This market is characterized by quality requirements and preferences developed through many years of experience with scallops from about twenty countries. The reputation of Norwegian scallops in the US market, be it more or less deserved, makes the industry extremely vulnerable to

competition from the United States itself and from the other supplying countries. One of the objectives for the strategy in the near future must be to reposition Norwegian scallops to be an attractive product for purchasers that are attractive from a Norwegian point of view. This report presents background material and guidelines on how such a repositioning can be achieved. (p.5)

France is today the only European country with a reasonable consumption of scallops. There are no obvious reasons why this is so. Economics, restaurant densities, consumption patterns and population size do not place France in any unique position as a potential scallop consumer compared with many other European nations. The reason for the high scallop consumption in France is that the country traditionally has had a scallop resource in their own coastal waters. There are many examples today of traditional consumption patterns spreading rapidly to other countries, and we believe that most European countries can develop into considerable markets for Norwegian scallops. Another objective for the strategy is to give guidelines for development of one or more European markets for scallops.

The report is structured like the project itself. The study has followed tested and approved procedures for the development of marketing strategies on the plant- or industry wide level.

1. Internal analysis
2. Market analysis
3. Competitor analysis.

In this report we have excluded the internal analysis and concentrated on the principal conclusions from market- and competitor analyses. The report also contains a strategy section where we have attempted to outline possible directions that can be taken to strengthen the position of Norwegian scallops relative to close substitutes (we have drawn the lines for the market around scallop products), and to develop new markets for

this product.

In this report we have pulled out the principal conclusions from the analytical part for presentation. Readers that might be interested in further background material are referred to a separate report on the market- and competitor analyses. This report is based on a number of draft reports prepared in the project period. The most important part of this report is, in our opinion, the strategy part. The analytical part is, however, necessary for understanding the assumptions that our proposed strategies are built on with respect to market conditions for scallops.

## 3. ANALYTICAL MODEL p.6

Competitive advantages come from the value an industry is able to create for the buyer of the product. Similarly, competitive disadvantages are the results of the competitors being better able to create products and product characteristics that are valued by the various buyer groups. An understanding of this total value can only be achieved by analyzing what the buyers are really weighing when evaluating a product. By comparing the buyers evaluation criteria with his own and the competitors products, it is possible to determine his competitive position and which measures that can be taken to move in the direction of a more favorable position.

To obtain a more precise picture of the strong and weak points of the Norwegian industry in comparison with competitors, an attempt has been made to analyze the whole value added chain from the biological processes in the sea and to the buyers in the market. The logic behind this analytical model is that all the functions performed in the processing and distribution of scallop products can contribute to increased value for the buyers and increased costs for the processors. This applies to biological

conditions, catching and processing processes, marketing, product development and transport. Support functions like financing, product or process development and purchasing could in principle have the same effects.

Figure 1 shows a sketch of the processes involved in the catching, processing and distribution of frozen (Iceland) scallops:

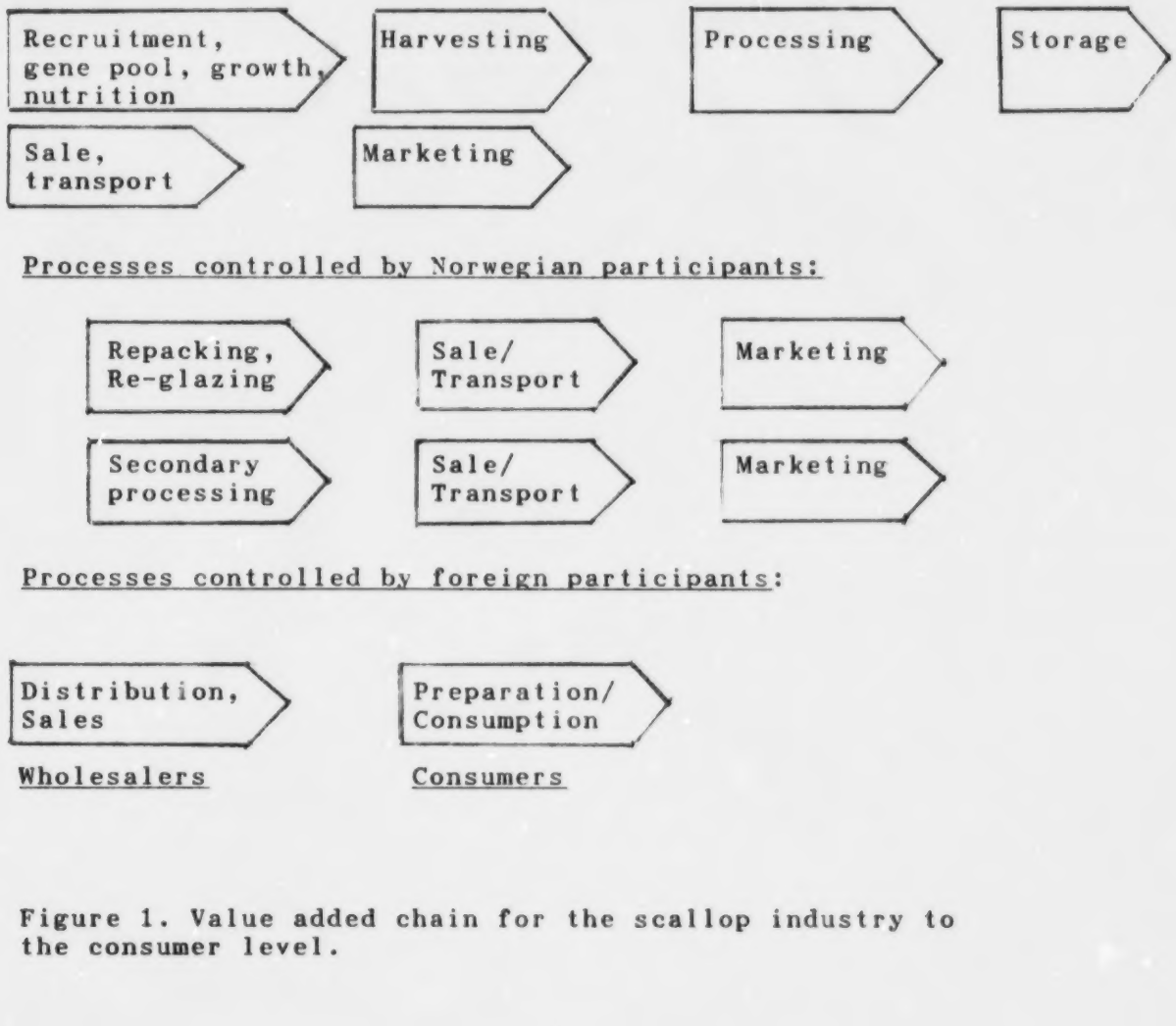


Figure 1. Value added chain for the scallop industry to the consumer level.

In an analysis of own competitive situation it is easy to revert to an evaluation of the relative cost position. We have two comments to this. First,it is impossible to estimate the cost position of the Norwegian scallop industry with sufficient precision. In the introductory phases of the project an attempt was made to develop a method for analyzing the relative cost position. The pure operational costs and the fixed costs can probably be estimated with a reasonable level of accuracy, but problems arise when these are to be compared with income data. In a fishing enterprise the level of income is dependent on variables like catch rates at any time and catching technologies. With the varying resource base that most scallop fisheries are based on, it is close to being an impossible task to give a good estimate of the catch rates at any or all times.

Our other commentary to a focus on costs is more p.8 fundamental. The scallop is a luxury product sold at high prices the world over. By observing the product selection in the modern distribution system, it can be found that it is seldom the cheap products that have marketing success. The successful products are those that have inherent properties appreciated by the consumer. If consumer preference can be met, the price level is less important.

Scallops as a product is evaluated from a number of characteristics. The point is that no individual factor in the processing chain or product alone determines which competitive position Norwegian scallops should have relative to other scallop variants. In the evaluation of Norwegian scallops ,the buyers take into account a number of qualitative characteristics and also price. Some of these characteristics are the results of biological conditions, some are the results of the harvesting-, processing- and distribution processes scallops are subjected to and to the marketing of the products. It is important to get a clear understanding of which conditions are important for the buyers and which are less important. This, together with

information on which groups have special preferences, form the basis for development and adaptation of the product in the future. Another important result of this analysis is to elucidate which characteristics of the products are determined by nature and which can be action parameters for the implementation of a future marketing strategy. The major part of the competitor analysis has followed this reasoning. In the following report we have chosen to present the most important differences that affect the competitive situation.

## 3. THE MARKET SITUATION - SOME CHARACTERISTICS. p.9

The market situation for scallops is characterized by global competition. Supplies are being offered by more than 30 small and large producing countries. On the demand side there are 3 large markets and perhaps 20 or so that are too small to have any influence on global prices. The trade in scallops is carried out between countries and continents. The products are to a large extent standardized so that the competition in the market is intense. Our opinion is that there are no niches in a traditional sense in this market where effective protection against competition from other producing countries can be found. Every position imaginable in this market is affected by the actions of the other domineering market participants. The market situation is in constant flux and characterized by imbalance between supply and demand. New producing nations are entering the market while others disappear. There is furthermore some tendencies in the direction of the opening of new markets even if these developments are slow. Only one of the suppliers (Japan) has any control over the volume produced and this leads to alternate situations of oversupply and shortages of products.

The products from these thirty or so producers are perceived by the market as relatively closely related substitutes. This

means that the actions of a producer nation can have substantial effects on the other participants in the market. Since so many independent single enterprises participate in this industry globally, the market situation becomes uncertain and risky. This is due to the fact that no individual participant can have a complete overview over what the others are doing at any time. Nervous market participants create problems continuously for both sellers and buyers. When making a purchase,buyers are always worrying that competitors have been able to buy lots at lower prices which in the next round shall be sold to the same buyer groups in the market. On the sellers side it is very difficult to time sales and to prevent pressure on prices. A consequence of this uncertainty is that both buyers and sellers "sit on the fence" and wait for market developments. This tactic will in itself lead to slow sales and increases the pressure on prices on the longer term.

An important characteristic of scallop markets is therefore the large variations in supplies being offered for sale from one year to the next. These variations are chiefly due to biological factors and do not reflect individual adjustments to the market situation. On the other hand, the demand is relatively stable in comparison, so that an imbalance occurs. The three major worldwide scallop consumers are USA, Japan and France. Variations in supply lead to violent swings in market prices and problems for participants with long term involvement in the form of investments in processing equipment.

That there will be variations in the scallop supply from other countries is a fact that Norway must have to live with as documented in the last part of this report. In our opinion it is illusory to believe that the situation in the scallop markets will stabilize. This does not mean that measures to affect the demand for Norwegian scallops cannot be implemented.

The objectives for a market strategy will, however, be somewhat modified, namely:

a) to reduce swings in the market, and

b) to take measures to ensure that price swings occur around a higher average.

Realization of these objectives will have a positive effect on developments in the scallop industry in Norway even with the realization that all variations in market prizes cannot be eliminated.

Even if the large number of scallops found in the market can be perceived to be close substitutes, it does not mean that they are identical. Several characteristics contribute to buyers perceiving that many scallop variants are different. First, many scallop products are different with respect to size distribution. The individual size categories can have somewhat different end uses, and buyer groups can have different preferences with respect to size. For some buyers the size range 15/20 scallops per pound can be ideal, while for others the size 60/80 per pound can be ideal. Secondly, scallops can have different taste, texture, waterbinding properties or color. Biological differences between the various species utilized commercially contribute to these characteristics. The harvesting and processing operations can also contribute to these differences by their effect on various quality parameters.

When these differences are weighed and added up by each buyer group, the result is that some scallop variants compete more directly than others. Expressed in a slightly different way, a chef in a restaurant will be indifferent to the choice of Norwegian or Peruvian scallops if price, packaging and quality otherwise is the same. Some restaurant owners would, however, buy Norwegian scallops rather than Japanese even if there is a considerable price differential.

## 4. WHAT DETERMINES PRICE AND COMPETITIVE INTENSITY? (p.11)

In ordinary economic jargon, it is said that price and competitive intensity in an industry is determined by an interaction between supply and demand of a particular product. This is also the reality for Norwegian scallops. Without a closer definition of what is meant by the supply concept and demand concept, one is no wiser than before. After having studied the scallop markets from various angles, the conclusion is that price- and competitive intensity in the scallop markets is chiefly determined by a limited set of factors. These are shown in the diagram below:

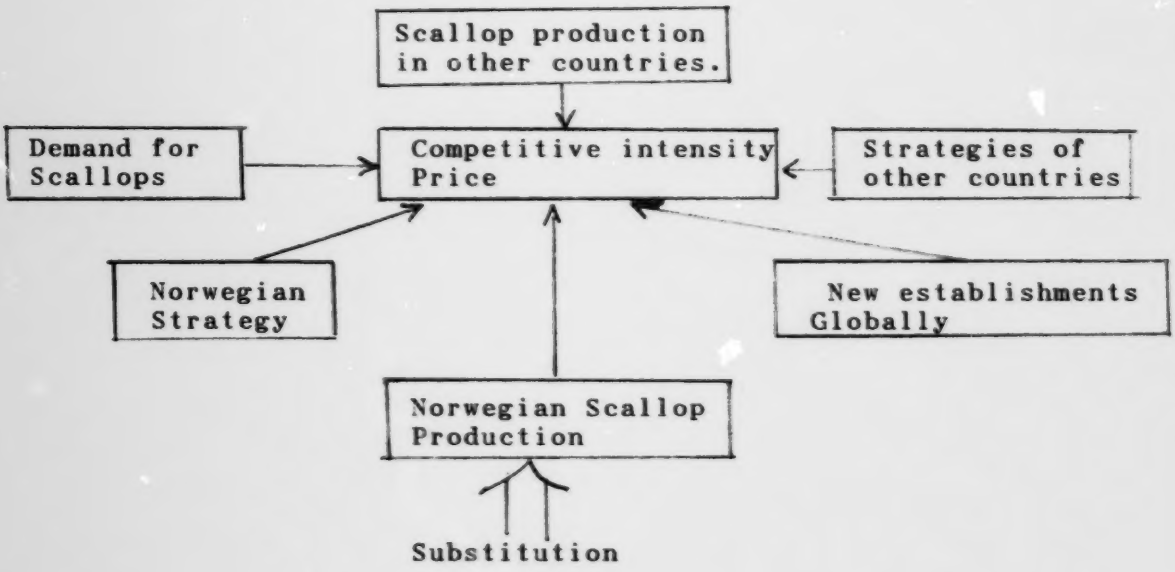


Figure 2. Competitive forces in global scallop markets.

In the analytical part of this report attention will therefore be concentrated on these factors. As an introduction some comments will be made about this competitive model to further elucidate what determines the connection between the individual factors and the competitive intensity . The starting

point for this discussion is again to point out important dimensions in each individual factor.

Scallop production in other countries. p.12

The effect of the scallop production in other countries hinges on two things: Volume of production and qualitative aspects of the production as being presented to the buyers. These qualitative characteristics are in turn determined by resource- and biological factors and processing variables. With respect to volume of production it is important to obtain a measure of the following parameters:

1) Projected level of production in the near future
2) Probable average production
3) Production potential for each country

These values will give us a basis for evaluating price levels and competitive pressures from each producing country today and in the future. Information on these parameters have been assembled by analyzing catch - and production statistics, industrial structure in the individual countries and information on the resource outlooks for the individual scallop stocks.

With respect to qualitative aspects of the production in other countries, there is a logical division between what can be called resource managed and process managed competition. With the term resource managed competition, we mean the characteristics of the raw material (live scallops) given for the further process. Important elements that determine the level of competition for resource managed products are color of the muscle, size of the muscle, taste characteristics, texture and water binding ability (measured as drip loss after thawing or at preparation). Important differences between countries with respect to processing can be found in the harvesting and on-board handling steps. Our studies of other competitors quickly showed that there

are substantial differences between countries. The technologies used spring from the same basic principles. The main differences are in how long the product is stored fresh or alive before being frozen or made available to end users. These differences give rise to differences in freshness which normally would be an important quality criterium for shellfish in general. Other aspects of the process are if the industry is able to supply the product with or without gonads, if the product can be supplied together with a full line of seafood products and the transport time to the market. These qualitative and quantitative aspects of the harvesting process in other countries will collectively contribute to the competitive intensity for the Norwegian scallop industry. In the short term we believe that the production in other countries will be the most important single factor that affects the competitive intensity in scallop markets. The (p.13) quantitative aspects of the process are, however, more important in the longer term ( I believe the author means qualitative aspects in this case. Translators note).

Norwegian scallop production

Qualitative aspects and the level of the Norwegian scallop production will have the same effects on the competitive intensity as the other producing countries. We have pulled it out as a separate factor because the industry within a certain framework has an opportunity to manage this factor. This is in contrast to the production in other countries which could be considered to be a relatively fixed parameter.

New producers globally

In addition to the output of existing producing countries, the competitive intensity will be determined by which new producing countries and new production forms that could possibly be established within the scallop industry. That this is a valid

option can be confirmed by at least two observations. First, three new producing countries have appeared on the scene in the 1980's and contributed to changing the competitive situation for scallops. These countries are processing the scallops onboard the harvesting vessels. Second, there is an intense research effort underway in several countries with the objective of developing commercial rearing of scallops. Discovery of new wild stocks and a breakthrough in artificial rearing will contribute to changing the competitive intensity in the markets.

Marketing strategy, Norwegian and other countries

The marketing strategies chosen by the Norwegian scallop industry and that in other countries will contribute to determining the competitive intensity. An example of this effect can be seen at the present time (February 1988), in that Norwegian exporters in a period have achieved higher prices on the French market than on the U.S. market. The explanation for this is that American, Canadian and South American producers and exporters have chosen the United States as a target market for their products. If they have had as strategy to distribute the production between several markets, there would have been a parallel decline in prices both in France and USA to a much higher degree. In Iceland there is an indication of a strategy where the processors are trying to increase their share of secondary processed products through the development of a product line of various breaded products.

Correspondingly, the strategy of the Norwegian scallop industry can affect the competitive intensity through choice of target groups and long term efforts to service these groups better than most competing suppliers.

Demand for scallops p.14

The factors listed above deal with various relevant sides of the global supply of scallops. The demand for scallops is the

second factor that together with supply determines the competitive intensity in this industry. Even if most readers will have an intuitive understanding of what is meant by demand, we will try to make it more precise by defining demand as:

"Desired consumption of scallops at a given price in Norwegian kroner".

With this definition of demand, it is the factors that influence the level of demand at any time that are of interest. Initially we will largely deal with factors that could possibly affect the demand. These potential factors or collective concepts are summarized below:

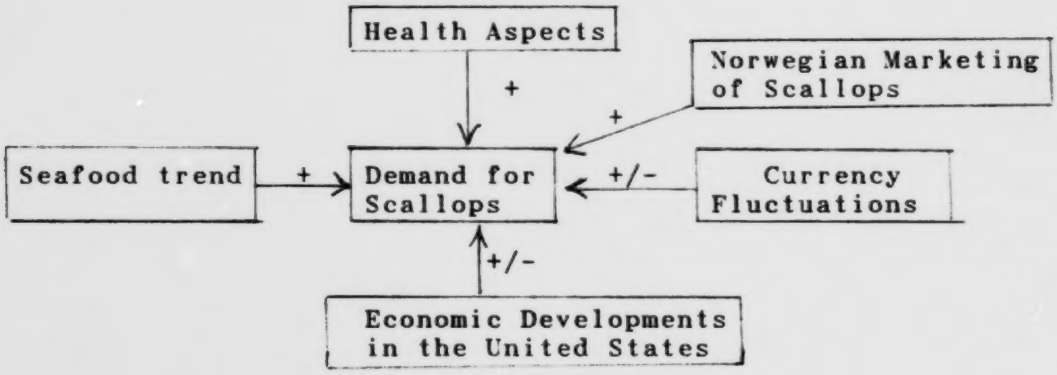


Figure 3. Factors affecting the demand for scallops

Of these factors there are some that we assume will have special importance in the next few years:
Economic developments in the United States, the exchange rate of U.S. dollars vs. Norwegian kroner, a continued trend towards a healthy lifestyle in the U.S. and the trend towards higher seafood consumption both in Europe and the United States.

These are developmental trends that will happen independently of actions by the Norwegian scallop industry. Our action variable with respect to developments in demand is the marketing activities being pursued. These have the potential to

develop the existing markets in USA and France, but also to develop new markets for these products (especially with other European countries in mind).

Substitution from other products

Substitution from other products than the various scallop variants tends to be a catch - all where price variations are placed that cannot be explained by the other factors mentioned above. Identification of substituting products is quite a complicated task from a purely technical point of view, and we have not priorized it in this project. However, we do not think there is any doubt that substitution from other products can have an influence on the price for scallops. A (weak) support for this view is that only maximum 45% of the price variations could be explained by variations in exports and landed quantities of scallops in the United States in the period 1983/86. Even if we have not studied this problem in the present study, the industry itself should be able to collect information on substitution between scallops and other products in the future. The figure below can in this connection be used as a search schematic for which product groups that can be suspected to have an influence on the competitive intensity for scallops.

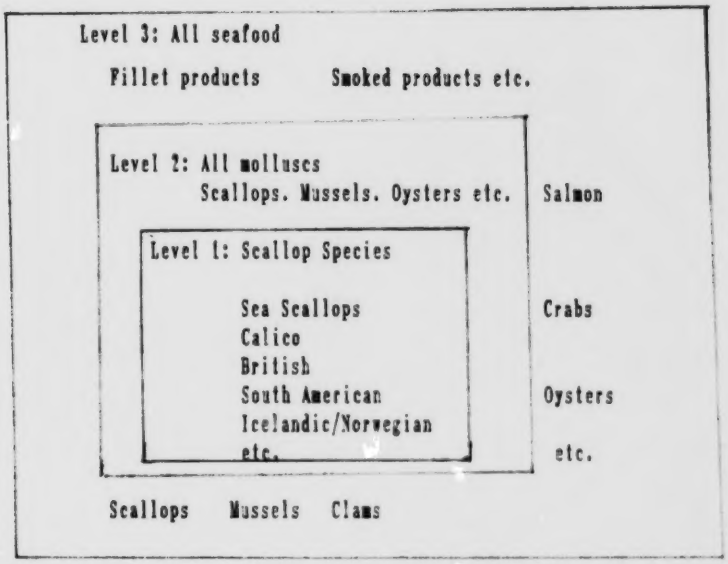


Figure 4. Classes of possible substitutes for scallops.

One can imagine that the effect of these substitutes differ from the effect of competition from other scallop variants in many ways. The most important difference will be that the connection between variations in supply of these substitutes and prices that can be obtained in scallop markets will be relatively weak. Therefore, only extreme differences in the supply of these products can be expected to have any influence on the market situation. We don't recommend that many resources be used (p.16) to monitor the production of these peripheral substitution products, but one should be aware that a strong growth in the production of certain products can affect the demand for scallops.

## 5. ON SUBSTITUTION, OR: WHO ARE THE MOST IMPORTANT COMPETITORS TO NORWEGIAN SCALLOPS?

Before we continue and present the results of the analyses of each competitor country, we will make some comments on which countries are considered to be the most direct competitors in the market. We have used three instruments in the attempt to identify the closest competitors:

1) Information on relative landings

2) Results of questionnaires submitted to American importers.

3) Statistical analyses of the relationship between quantity and price for the various scallop variants.

The figure below shows how scallops from the various producer countries compare in size relative to Norwegian scallops:

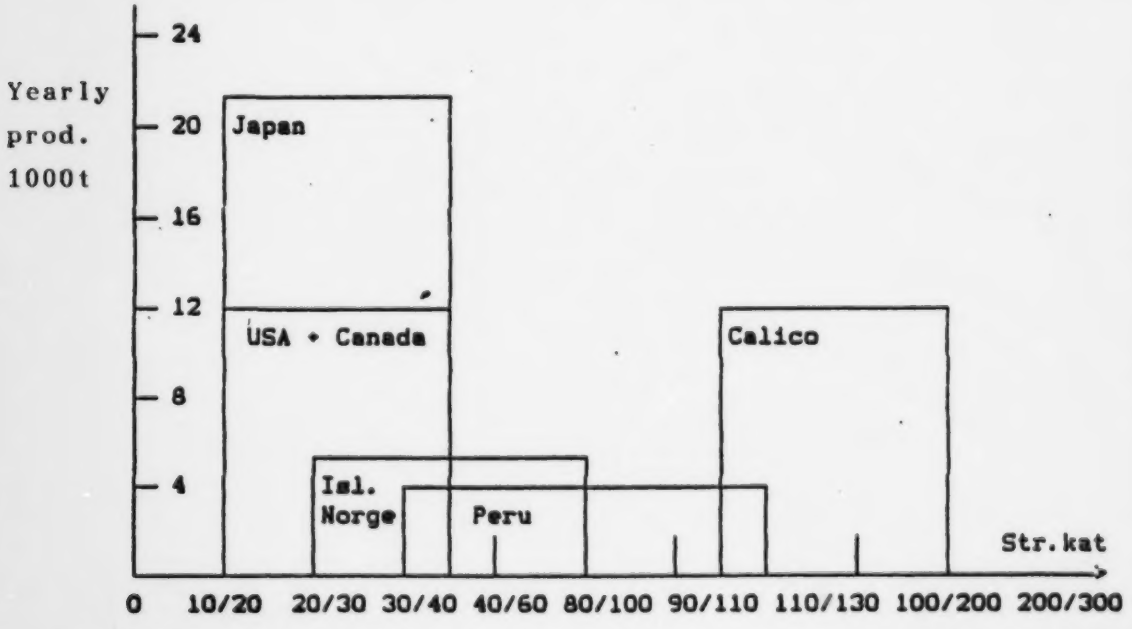


Figure 5. Size distribution of scallops produced by the largest producing countries.

The vertical axis in the figure gives a rough average of the yearly production for each country or each resource.

The size distribution is one indicator of how two scallop variants are perceived by the market. However, there are no sharp dividing lines between which sizes that affect the demand for the other size categories. In other words, there is overlapping to a high degree between the utilization of the various size categories. The figure indicates that scallops from Peru, Canada/USA (Sea Scallops), the United Kingdom, Panama, Iceland, Australia and Japan have size categories close to parts of the Norwegian production. Especially close are scallops from Iceland and Peru, and these can therefore be considered to be easily substituted with Norwegian scallops. As we pointed out above, it is not enough to evaluate the competitive pressure from similarities in the products. The competitive pressure from an industry is determined by the qualitative and quantitative characteristics of each resource. It is therefore also necessary to evaluate the production volume before a producer nation can be classified as important or less important. Peru can be used as an illustration of this reasoning. The industry in that country has a product that is close to the Norwegian with respect to size, but the volume of production has been so low in the past two years that the competitive intensity has not been affected by production and exports from that country.

Assessments by American importers agree quite well with the results from an assessment of the size of the products. Importers evaluated scallops from Peru, Panama, Iceland and Canada as the most important competitors for Norwegian scallops. Some were of the opinion that all scallop variants compete with each other, while others said that there was only relatively slight competition between the various scallop types.

The method that perhaps gave the clearest picture of the competition between the various scallop variants is the statistical analysis of production- and import data in USA for

the period 1983/86. The method was in brief to search for connections between quantities offered for sale of the various scallop products and the prices obtained in this period. The attention was in particular focused on the prices obtained for Norwegian scallops, which in the study was represented by Icelandic. The next figure summarizes the most important results of this study.

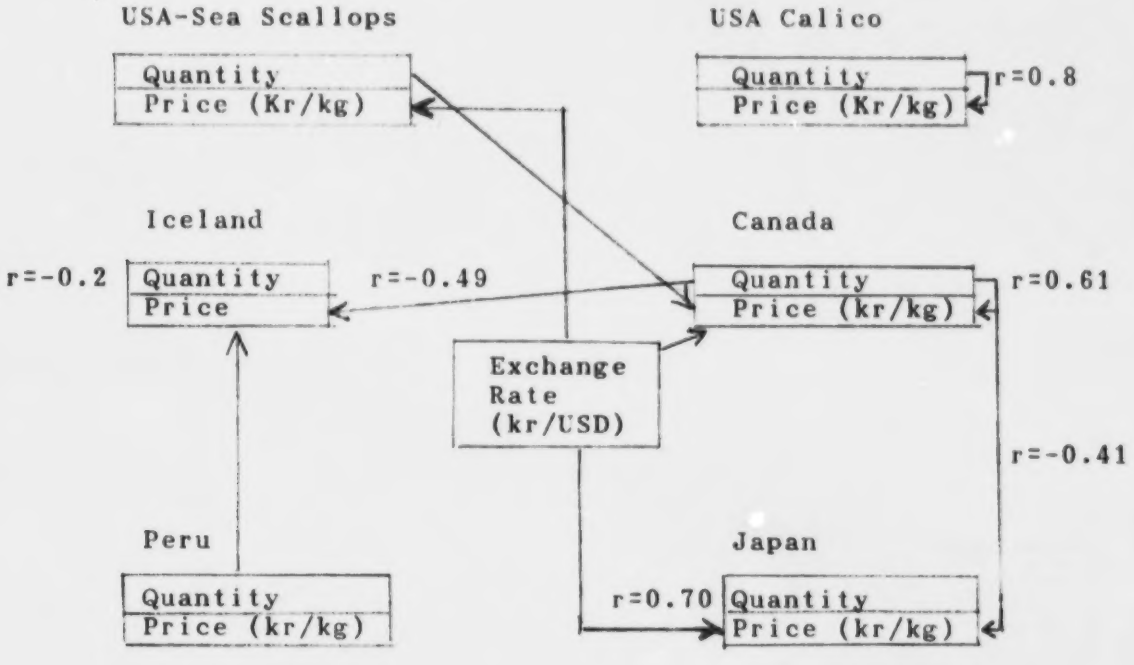


Figure 6. Interaction between prices and supply on the American scallop market.

It can be seen that prices obtained for Icelandic scallops in this period has been affected chiefly by two factors: the Canadian exports to the U.S. market and the Peruvian exports to the U.S. market. Four other important conclusions have been made

regarding factors that have not affected the prices of Icelandic exports to the U.S.A. First, there have violent swings in the production of Calico scallops in this period without any effect on the Icelandic scallop prices. This is an important finding since both Norwegian and Icelandic scallop producers have pointed to this size when they have attempted to explain price variations. Calico scallops seem to be perceived as a different product by the American market and the production levels have not affected the prices of any of the other scallop types.

Secondly, the Japanese export quantity has not had any direct effect on the Icelandic scallop prices. We believe this is due to the special production- and market conditions faced by the Japanese scallop industry. Japan can become an important competitor for Norway in the future if the growth in production in periods can be in imbalance with the total world market. This depends upon how well the Japanese can manage their production volume.

Another (somewhat surprising) conclusion from our statistical analysis of the price formation is that production of American sea scallops has not had a direct influence on the Icelandic prices in the period. This result can, however, be an artifact. The statistical material covers the period 1984-86. In this period American landings of sea scallops were relatively low. In periods with low production we have reason to believe that American sea scallops are sold into a relatively protected and limited market for fresh, high quality products. In periods with high production some of this quantity is sold into the lower-priced market segment. It is this segment that uses Norwegian and Icelandic scallops. In periods with high production, the American volume will therefore have a direct effect on the demand for Norwegian products.

A last aspect we will include in the study of substitution in the scallop market is the effect of the Icelandic production on prices. The Norwegian industry has several times assumed that

Icelandic production and exports are determinants for the market situation for Norwegian scallops. Our studies do not support this assumption. In the period studied the Icelandic production volume had no significant effect on the price level, not even for Iceland's own production. The explanation for this is that the Icelandic production is too small to have any effect on the scallop market regardless of what Icelanders choose to do at any time. With a yearly production of ca.2000 tonnes , the Icelandic industry has a market share of 3% in the U.S.A. This is obviously too low for supply variations to have any effect on the price level.

The primary competitors for Norwegian scallops therefore appear to be Canada and Peru and to a smaller degree Iceland and U.S. sea scallops. To evaluate the market situation in the short term, it is therefore the production level from these resources that should receive attention, and especially the two first. However, the picture becomes somewhat more complicated in that there are constant changes in the volume of production from the various countries. New countries enter the industry, and established producers drop out. This will be discussed in more detail in the next section where we analyze the industry in the most important scallop producing countries.

## 6. THE GLOBAL SCALLOP INDUSTRY

Before starting the discussion on each producing country, a survey of the worldwide scallop industry will be given. The position of the United States as the domineering import market for this product enables us to use U.S. import statistics as an indicator of the composition of the worlds producing nations. In 1986 the U.S.A. imported scallops from some 30 countries. The market share of these nations also reflects the size of the industry in each country. Nine countries, Argentina, Australia, Canada, Iceland, Japan, Norway, Panama, Peru and England were responsible for 96% of the imports to the U.S.A. in that year. These countries, together with the U.S.A., represent more than 90% of the total world production. The list contains small producers like Argentina and Australia. These countries have in recent years produced less than 2000 tonnes product weight. In reality, Canada, U.S.A., Japan, Panama and Norway produced more than 90% of the total world supply in 1987.

The situation is not static in that the yield from scallop resources the world over is quite variable from year to year. However, the figure below shows the total world scallop production in the 1977 - 84 period as an indication of developments in that period.

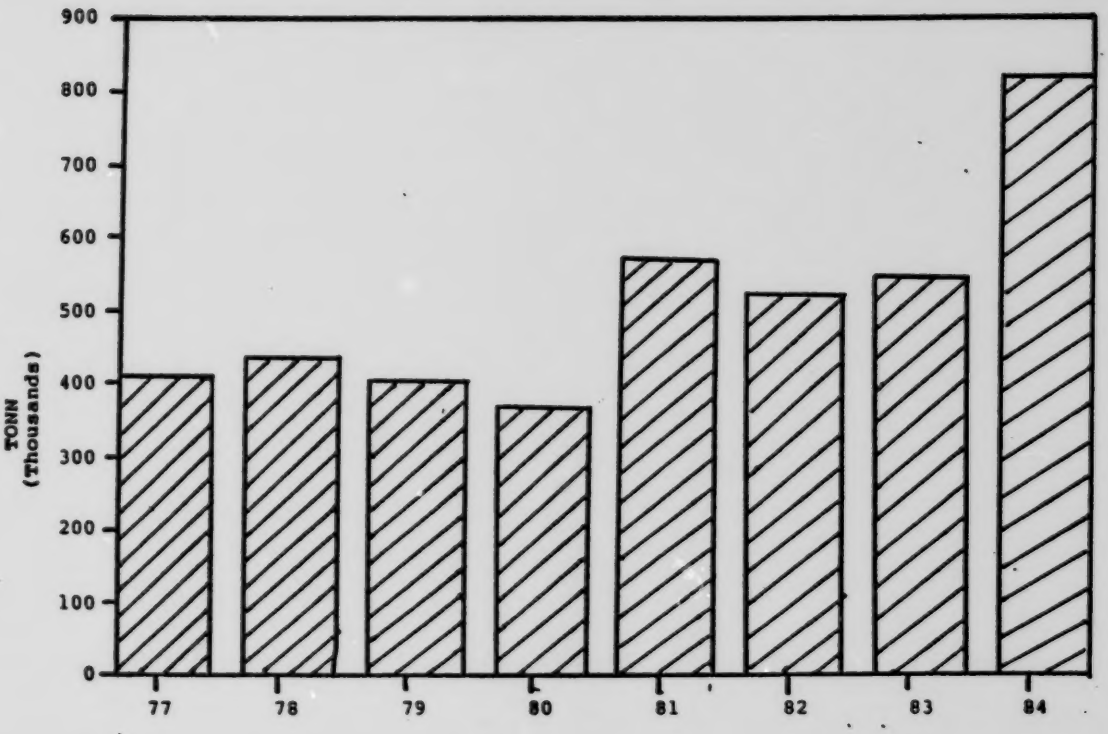


Figure 7. Global scallop production in the period 1977-84.

The production of Calico scallops has been deducted (p.22) from this figure since this variant is perceived by the market to be quite different from the others. Our estimate of the scallop production in 1987 is shown on the next page.

| | | |
|---|---|---|
| USA/Canada | ca | 150,000 t |
| Panama/Peru | " | 35,000 t |
| South America except Panama/peru | " | 10,000 t |
| Japan | " | 250,000 t |
| Iceland | " | 20,000 t |
| Norway | " | 35,000 t |
| United Kingdom | " | 20,000 t |
| France | " | 10,000 t |
| Australia | " | 20,000 t |
| Far East expt.Japan | " | 30,000 t |
| Total production estimated | " | 580,000 t live weight. |

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A rough conversion to product weight can be made by using 12% as an average yield. This gives a global product weight of ca. 70,000 tonnes on a worldwide basis. This total is approximately the same as the Norwegian production of farmed salmon in 1987.

## 7. INDIVIDUAL COMPETING COUNTRIES p.23

### 1. Japan

Japan has on average been the worlds largest producer of scallops in recent years. The Japanese scallop industry is special compared with the others we are dealing with since a large part of the Japanese production come from farming and other fish culture operations. Rearing of scallops started in earnest in the beginning of the 1970's, and from 1975-85 the production trebled. Today the yield from scallop farming operations is

higher than from the traditional fishery for scallops.

JAPANESE CATCH + CULTURE OF SCALLOPS

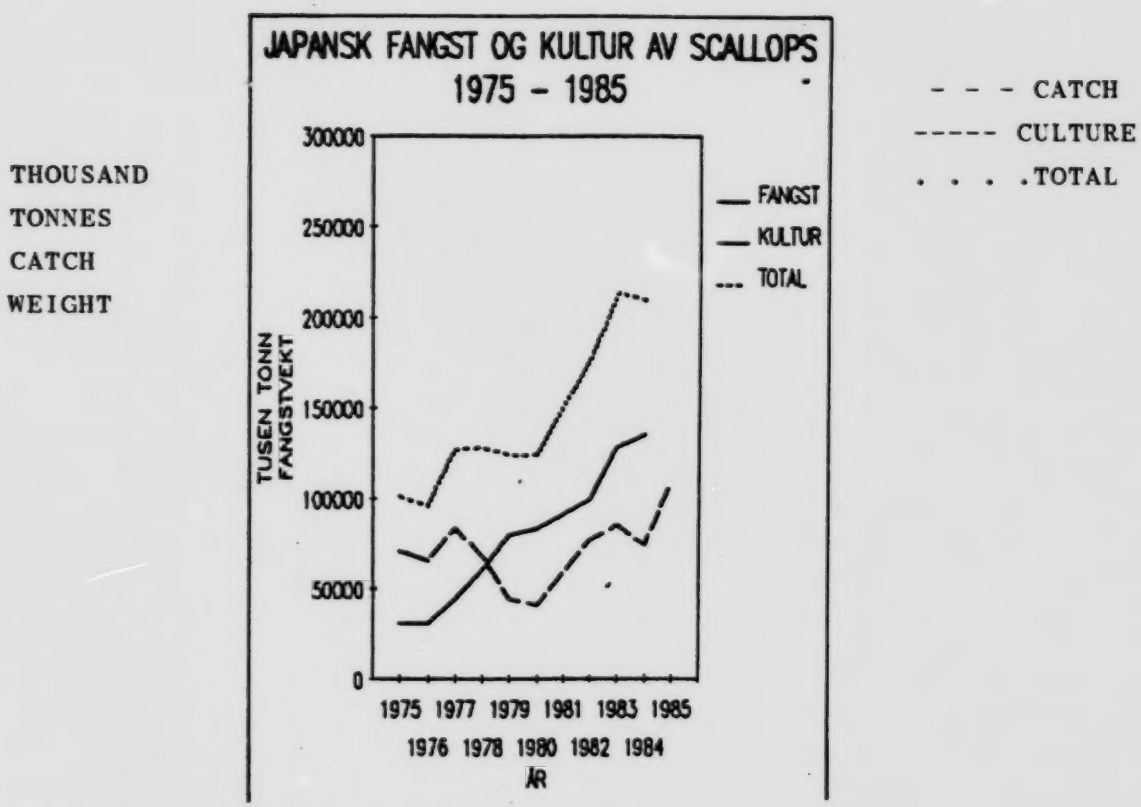



Figure 8. Japanese production of scallops (catch+farming)1975-85

Market structure

The most important individual market for the Japanese scallop production is the home market. Ca 70% of the production , or 15-20,000 tonnes product weight a year is marketed and consumed on the home market. This part of the production will therefore not otherwise have any influence on the world market. A total of thirty percent or 5-6000 tonnes is, however, exported each year to the same markets that Norwegian scallops are sold on. The most important export market for the Japanese industry is

the United States with about 5000 tonnes a year. France has been the second most important market with yearly imports of about 1000 tonnes from Japan. Smaller quantities have been shipped to West Germany, Spain, Belgium and other European countries. This distribution on export markets has been relatively stable in recent years, and it seems that Japanese exporters have chosen to concentrate their exports to these countries.

Product forms

Japanese scallops are somewhat larger than Norwegian scallops, but the difference is not large enough to discount the competitive pressure coming from the Japanese. There are no doubts that sharp variations in the Japanese production volume will affect the market situation for Norwegian scallops (see discussion on competitive forces above).

| Category | Nos/lb. |
|---|---|
| 1 | 8/12 ( with gonads) |
| 2 | 10/20 |
| 3 | 21/30 |
| 4 | 31/40 |
| 5 | 41/50 |

Figure 9 Size variations in Japanese scallop production.

Production process

Another distinctive difference in the competition from Japan is that the industry has an opportunity to delay harvesting in periods when markets are poor. This is also practiced to a large extent. American importers claim that when the market price for Japanese scallops fall under $ 4.50/lb. the Japanese will stop their exports. This number can be taken with a grain of salt, but there is no doubt that Japan has better opportunities to reduce

the pressure on the American market than other suppliers when the market is tight. Japanese producers can not only delay harvesting, but they also have a strong home market that can absorb overproduction. Finally, the shells are processed manually so that the production can be directed at France (with gonads) or the other European markets if so desired. The industrial structure in the export sector makes this possible. Few and financially strong enterprises makes it easier to adjust supply to temporary changes in demand. The consequence of this production process is that Japan, to a certain extent, can contribute to dampen the effect of the swings in supplies from other countries. In periods of oversupply exports can be reduced and increased in periods of shortages. We have some documentation showing that Japanese exports follow this pattern.

Product quality

The Japanese product has a somewhat "ragged" quality reputation, both on the American and the French markets. It has in particular been claimed that the Japanese to a large extent have been glazing the scallops too heavily. This problem has been so widespread that it has directly resulted in stepped up inspections for imports into France. American importers also complain heavily about excessive glaze on Japanese scallops. In addition, it also appears as if Japanese scallops by nature has a low water binding ability resulting in high weight and volume losses on preparation. It has also been reported that Japanese scallops have a soft texture.

A strong plus for Japanese quality is tied to aquaculture as a form of production. In controlled rearing of scallops there are greater opportunities for matching the size categories to the markets than in the harvesting of wild stocks. Quality control and grading can potentially also be done better if sales are organized with these aspects in mind.

Distribution

In discussing distribution as a competitive factor, we have chosen to discuss the qualitative side of this function. These costs cannot be segregated from the other cost components in the value added chain. High distribution costs can be offset by low costs associated with other functions. In this study we have had to concentrate our attention on the qualitative sides of the value added chain due to data and modeling problems (see separate note on these problems).

Norway is located relatively far away from the two important export markets U.S.A. and Japan. This does not result in any competitive disadvantages when exporting to the United States, but Norwegian exporters are able to deliver smaller (p.26) quantities and to ship faster to the French market. The time elapsing between ordering and delivery is important in a turbulent market like the scallop market. Prices can fall quickly, and the risk that prices may fall between order and delivery must be compensated for by a lower price. With respect to flexibility in the size of a shipment, it is not considered a problem when selling to the large exporters. If the distribution strategy is to be altered whereby sales are made to a chain further into the market, it may be required to ship smaller quantities.

Marketing

It is not very likely that Japanese products have achieved any special identity on the consumer level. We have not been able to register that individual Japanese enterprises or the Japanese industry collectively have implemented consumer oriented campaigns in recent years. This applies both to the American and the French markets. However, on the home market efforts are being made to stimulate the demand on the consumer level, for instance through television.

Furthermore, we have not seen that either retailers or

restaurants use the origins of the scallops in the presentation of the products to the final consumers. In France imported food products must be labelled with the country of origin, but this is usually done in such a discreet manner that it probably has little effect on preferences and choices on the consumer level.

Finally, it appears as if most of the Japanese exports are repacked before reaching the consumer. The share of the products being distributed for preparation at home is packaged under the label of an importer or distributor. It is therefore a national brand that is being marketed and which is of any importance for purchasing decisions and preference formations: not that the products are produced in Japan.

We therefore conclude that Japanese products do not have their own identity in the consumer market. The choice by the consumer must therefore be made from other criteria such as availability, size, packaging, color, price etc.

Most of the Japanese marketing effort in France and the United States is aimed at the importers. The Japanese are therefore carrying out the same (lack of) marketing as the Norwegian scallop industry. The marketing function includes visits to the importers where specifications and (often quite loose) delivery plans are established. It includes daily contact with importers by telephone, telex and telefax where information and evaluations of the market situation in the short term can be exchanged, and details regarding specific shipments firmed (p.27) up. The further work on buyers further down the distribution chain (chiefly processing plants, wholesalers, supermarkets, fish markets, restaurants and consumers) is largely left to the importers.

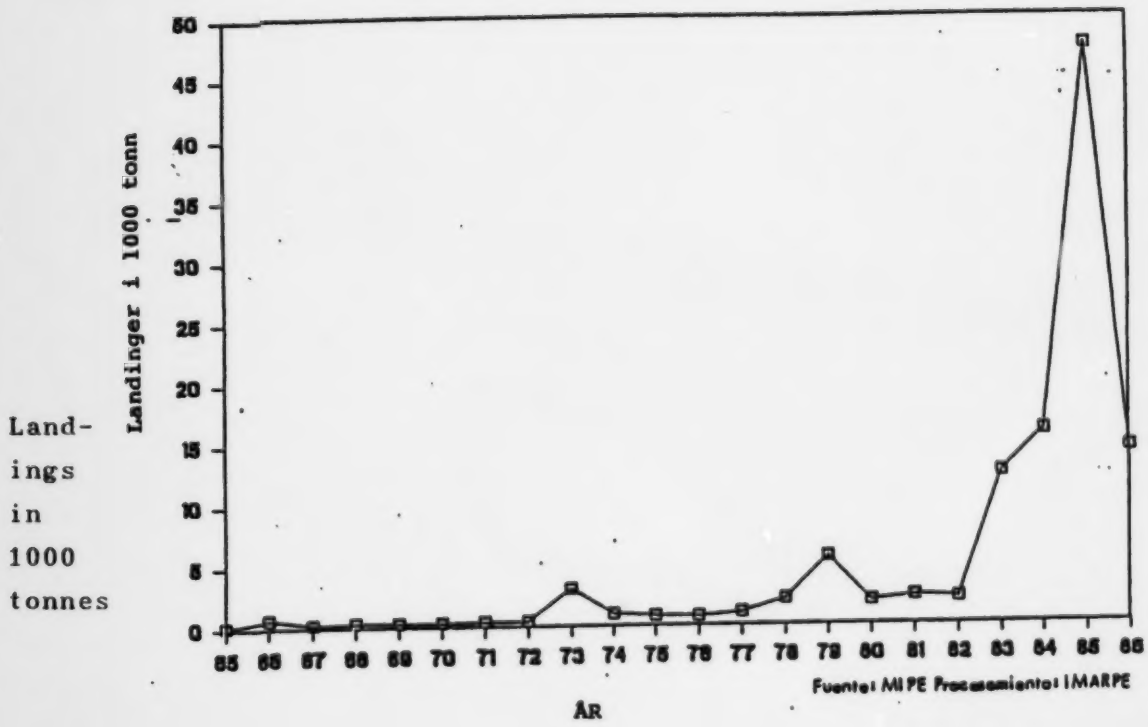
Outlook for Japanese production

As mentioned above, the Japanese scallop industry has had a sharp increase in volume over the past 10 years. In this period the production has increased from 100,000 tonnes to 250,000

tonnes live weight. Japanese biologists have, based on the areas suitable for scallop aquaculture, calculated that this industry has a potential for a production of 500,000 tonnes, or a doubling of the current production volume. A growth of this magnitude will create a sharp imbalance in the world markets for scallops. However, there are indications that such growth will not easily take place. We refer again to comments by American importers that there is a price level below which it is unprofitable to export to the United States. These opinions are supported by our statistical analyses that also show that the Japanese react to low prices by lowering the volume. A further expansion of the production capacity in Japan can therefore be slowed by how quickly global markets can be developed. An increase in the production volume must occur in parallel with an increase in consumption. If the Japanese industry should direct their efforts to a parallel development of production capacity and markets, the effects on the market situation for Norwegian scallops can be slightly negative, neutral or positive. In the best case, there can be a temporary decline in the Japanese production. In 1977 there were blooms of red algae, so-called "Red tides", that led to a decline in the volume produced over a 3-year period. Since red tides have only occurred once in the past 20 years , the probabilities for new outbreaks are relatively low. If a phenomenon like this occurs, it would have a positive effect on the market situation for Norwegian scallops.

## 2. Peru

Peru emerged as a large producer of scallops for a period since 1984. The increase in the Peruvian scallop fishery started in 1983 and reached a peak in 1985. In 1986 there was a decline, and in 1987 the production was only a fraction of the peak year 1985 (probably under 500 tonnes). The figure below shows the developments in Peruvian scallop production from the middle of the 1960's until today.




Land-
ings
in
1000
tonnes

Figure 10 Peru. Production of scallops 1965-86.

It can be seen that the Peruvian production of scallops was insignificant from the middle 1960's to 1983. In that year large stocks of scallops were discovered in shallow water along the northern coast of the country. A large harvesting- and processing capacity was built the same year to develop this resource. At the peak as many as 4-5000 fishermen and 6000 plant workers were engaged in this industry. Peru produced and exported somewhat over 5000 tonnes product weight to the U.S. in 1985.

Product characteristics

Peruvian scallops are no doubt a close competitor to Norwegian scallops. The product has the same size distribution, and we have found that the prices attained for Norwegian and Icelandic scallops were affected by the quantities exported by Peru at any time.

| Category | Scallops/lb. |
|---|---|
| 1 | 30-40 |
| 2 | 40-60 |
| 3 | 60-80 |
| 4 | 80-100 |
| 5 | 90-110 |
| 6 | 120 + |

Figure 11 Size categories of Peruvian scallops

Market structure

Peruvian exporters have concentrated their efforts completely on the American market. In 1983-87, 100% of the exports went to that market. France and the other European countries do not appear to have been targeted by Peru. In the short term this means that the European market is somewhat sheltered from direct competition from Peruvian scallops. The variation in Peruvian production will also indirectly affect the demand in Europe since several of the suppliers to the American market have well developed market channels to Europe. They will therefore divert a greater part of their production towards Europe if the competition (as a result of Peruvian production) on the American market leads to a large price differential between Europe and U.S.A.

Over the longer term, Peru is also a potential direct competitor on the European market. First, Peruvian exporters could relatively easily develop sales- and distribution channels to Europe. Infrastructure for transportation exists already, and contacts with European importers could be established without large costs. Second, the Peruvian scallop industry has the technology and cost level to enable them to produce scallops with gonads. This will give them a competitive advantage in many markets and with certain categories of customers in Europe.

Distribution

The United States is the principal market for Peruvian scallops. Distances to various centers of consumption makes it possible to transport the products by road. This gives Peruvian exporters a competitive advantage over producers outside the American continent. Short transportation times lead to lower risks when buying from Peruvian than from Norwegian exporters.

Production projections

The boom in the Peruvian scallop industry is explained by biologists as a result of El Nino. El Nino is a warm ocean current that in some years come up along the Peruvian coast at Christmas time. This current has a catastrophic effect on Peru's largest fish resource, the anchoveta. Exactly the opposite occurs with the scallop resources. The current leads to a reduction in the natural predators of the scallop, growth increases and recruitment is enhanced. The positive effect is best illustrated by the 20-fold increase from 1982 to 1986. An absence of these favorable conditions has resulted in a sharp decline down to levels considered normal before El Nino occurred in 1982-83.

Even if Peru today is not of much importance for the market situation for Norwegian scallops, the events a few years ago showed that the country is potentially an important competitor. A production level similar to 1985 can have serious repercussions

for the demand for Norwegian scallops if it occurs at the same time as high production levels in U.S.A. and Canada. If we are to believe the explanation by biologists that the level of production of scallops in Peru is tied to El Nino, the next production top will occur 2-3 years after the next appearance of this ocean current. It is therefore of interest to map the frequency and any regularity of El Nino. The table below shows when this phenomenon has occurred in the last 100 years.

| Year | Interval |
|---|---|
| 1891 | --- |
| 1925 | 34 years |
| 1941 | 16 " |
| 1953 | 12 " |
| 1957/58 | 4-5 " |
| 1982/83 | 24 " |

Figure 12 Years when El Nino has occurred in the past 100 years.

It can be seen that the phenomenon has occurred 6 times since 1891, or on the average every 17 years. However, it is worth noting that the time interval between each occurrence is not regular. From 1953 to 1957 it was only 4 years, while from 1891 to 1925 the interval was as much as 34 years.

At the present time (1988) there are no indications that Peru will increase its scallop production in the near future. Authorities have closed the fishery for large parts of the year, and when it is opened, only small inshore vessels can participate.

## 3 Panama

Panama entered the international arena as a large supplier of scallops to the United States in 1986. The fishery started in earnest towards the end of 1985 when some trawler owners noted that some inshore fishermen started to land large quantities of scallops. The species harvested is *Argopecten circularis* which is related to the Peruvian *Argopecten purpuratus* , but which in weight is about 30% smaller. There are no catch statistics available from Panama, but by assuming that close to 100% is exported to USA, the production in 1986 can be estimated to be about 5000 tonnes product weight.

This resource has not been extensively studied by biologists so nobody is able to give good projections for production levels in the future. Some biologists have claimed, however, to have found a 5-7 year cycle between peaks that each last 2-3 years. The reasons for these peaks are then assumed to be favorable temperatures in the growing areas. If one assumes that the production will have approximately the same pattern as the other warm water species in the area, Calico and Peruvian scallops, the production in Panama is on its way down to stay at a low level for several years.

## 4. Other South American scallop producers.

Most South American countries have a certain production of scallops. The production volume is , however, so low that they do not warrant a thorough discussion in this study. For those especially interested in the scallop production in these countries, we refer to a separate report on this subject. (No reference given. Translators note). The following table indicates the maximum production volumes and sizes of these resources:

| Country | Maximum quantity | Average size (Shell height) |
|---|---|---|
| Chile | ~ 2000 tonnes (1984) | 7.0 cm. |
| Argentina | ~ 3000 " (1984) | 7.5-8 cm. |
| Brazil | ~10000 " (1980) | - |
| Mexico | ~2-3000 " (1983) | _ |

Figure 13 Production data from other South American countries.

It should be noted that the size distribution of these scallop resources label them as potential close competitors to Norwegian scallops.

At the present time there is no reason to assume that there will be a large growth in production from these countries in the near future. Looking back in time , it can be seen that none of these countries have had a production that makes them able to affect the market situation for scallops. However, by going back four years, the same could have been said about both Peru and Panama ( for that matter also Norway). It can therefore not be said for certain that these countries never will come in as larger producers of scallops some time in the future.

Common for the South American countries is the total concentration on the American market. All exports have gone to the U.S.A. A changing market situation can change this in that cheap labor makes it possible to produce scallops with gonads for the french market. However, in the short term, these countries are dependent on the U.S. market.

With these comments we leave South America and take a jump over the Atlantic to Europe. Apart from Norway, there are three countries in Europe with a scallop industry: Great Britain, France and Iceland. In addition, the Faroese have two new factory vessels in operation. It is still too early to predict how this fishery will develop.

## 5. France

France has since the last century harvested scallops in coastal waters. The French landings consist chiefly of the species *Pecten maximus* (large scallop). Only about 10%, or 100-150 tonnes of Queen scallops are being harvested, and then only as a bycatch in the regular scallop fishery. The French (p.33) scallop fishery reached a peak of about 20-23,000 tonnes round weight in the middle 1970's. As an indication of what has happened since then, the number of licenses can be used. In 1975 somewhat over 450 vessels participated in the scallop fishery in Baye de Brieuc. For the 1987/88 season the French fishery authorities issued 63 licenses for this area. The total quota is set at 2000 tonnes, while this area produced 14,000 tonnes in the peak year 1974. Most scallop stocks are therefore sharply reduced. The authorities have implemented strict regulations in an attempt to rebuild the stocks.These include limited entry, closed seasons, upper limits on vessel sizes and limitations on how many hours each vessel can fish per day (1-3 hours effective fishing). In addition, a program for releasing spat in these areas has been initiated.

France is a competitor only on the French home market. The country has always been a net importer of scallops. Even on the home market it is not clear how much competitive pressure the French landings exert. Norwegian scallops are used chiefly by the canning industry and others doing secondary processing, while a large part of the French landings go to the restaurant- and consumer markets fresh or alive.

In the short term the French landings are of little importance for the market outlook for Norwegian scallops. The stocks are so reduced that the effect of the French production is small. In the longer term, if French authorities can succeed in rebuilding the stocks, the result could be a reduced demand for Norwegian scallops. However, in the current market situation the

effect will be small because France is a small producer even in peak years.

## 6. Great Britain

Great Britain is a medium sized producing nation on a world scale. The volume in recent years has been around 20,000 tonnes per year (round weight). Of this about half consists of scallops (*Pecten maximus*) and the rest Queen scallop (*Chlamys opercularis*). Great Britain does not seem to be as vulnerable as for instance France with respect to variations in stock size. This can be due to the fact that British fishermen fish a number of small stocks around the island, and that they move from one ground to the next as catch rates drop. The fishery is also strictly regulated by the authorities. The figure below shows important fishing areas for the British scallop fisheries.

Figure 14 The most important fishing grounds in Great Britain.

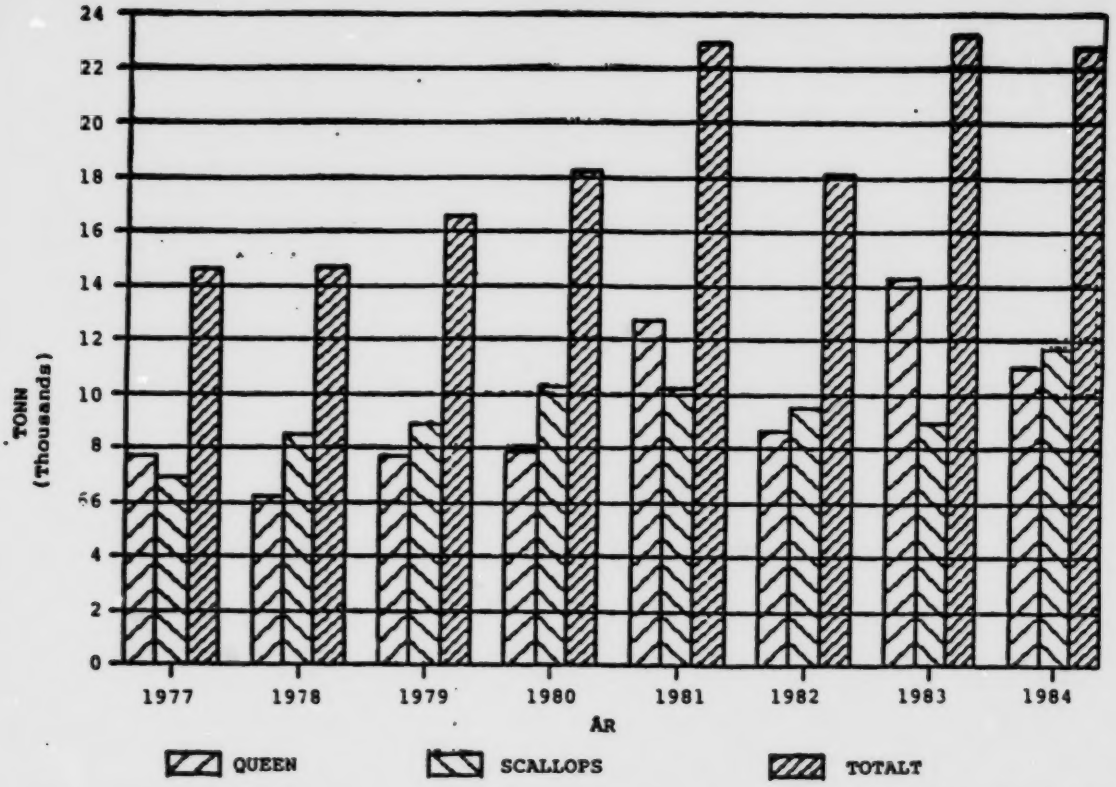



Figure 15 British scallop production (round weight) 1977-1984

The production volume has therefore been in the 14-23,000 tonne a year range in recent years.

Resources are assumed to be fully exploited, and it is not expected that there will be any large increase in scallop production in Britain in coming years.

The principal market for British scallops in recent years has been France. Originally much of the production went to the United States, but exports there are now minimal. British exporters are among the few that have worked systematically to develop the Spanish market for scallops.

## 7. Iceland

Iceland has almost 20 years tradition with catching, processing and exporting scallops. The fishery started in 1969,

and after a setback in 1974-75, landings have now stabilized at about 17,000 tonnes/year. The fishery is strictly regulated, and this has prevented overexploitation of the stocks.

Figure 16 Scallop fishing grounds in Iceland

Iceland has been of special interest to the Norwegian (p.36) scallop industry from the beginning. Since the Icelandic fishery is carried out on the same species, it has been assumed that what takes place in Iceland has considerable importance for the market situation for Norwegian scallops. This author is of the opinion that focusing on what takes place in Iceland is diversionary for two important reasons. First, the production of Icelandic scallops has been stable in recent years. This is supported by the figure below.

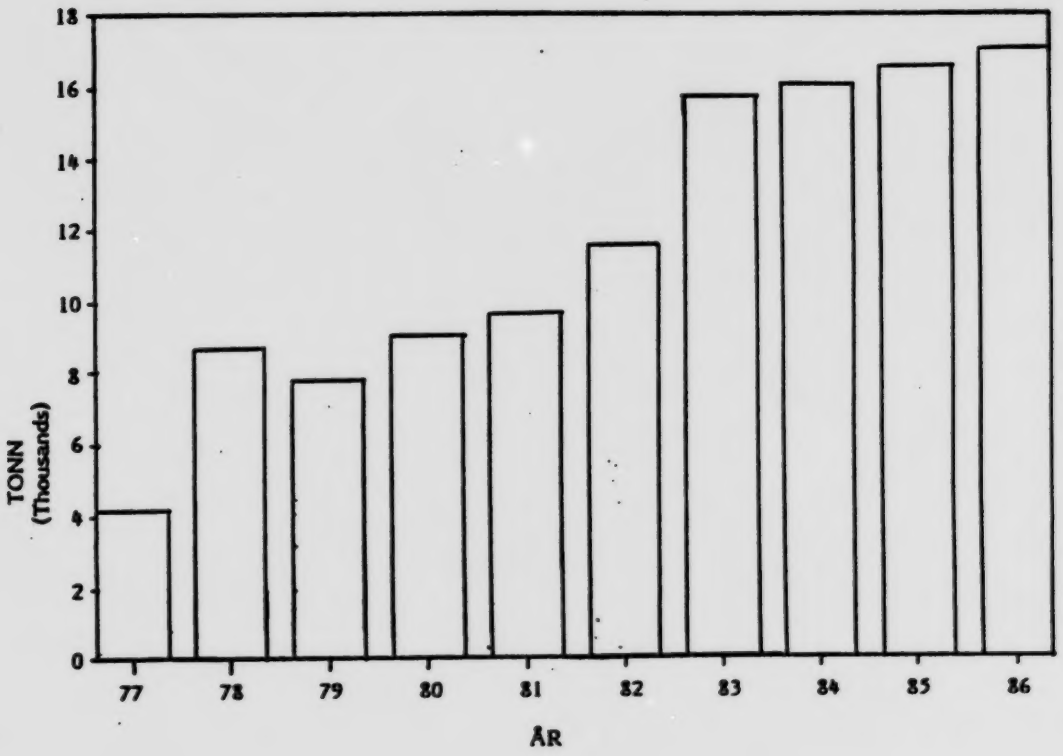



Figure 17 Icelandic scallop production 1977-1986

Our analyses show that how much is exported from Iceland is of no importance for prices neither for Norwegian nor Icelandic scallops. The reasons for the price variations must be sought somewhere else. Secondly, the market seems to be less sensitive to species and sizes than had been assumed. Therefore, the fact that Iceland produces the same species as Norway does not mean that the country is in a special situation as a competitor to Norway. In a tight market situation the Icelandic production could conceivably have an effect on Norwegian prices, and it is then of interest to know at what time of the year Iceland is most active in the markets:

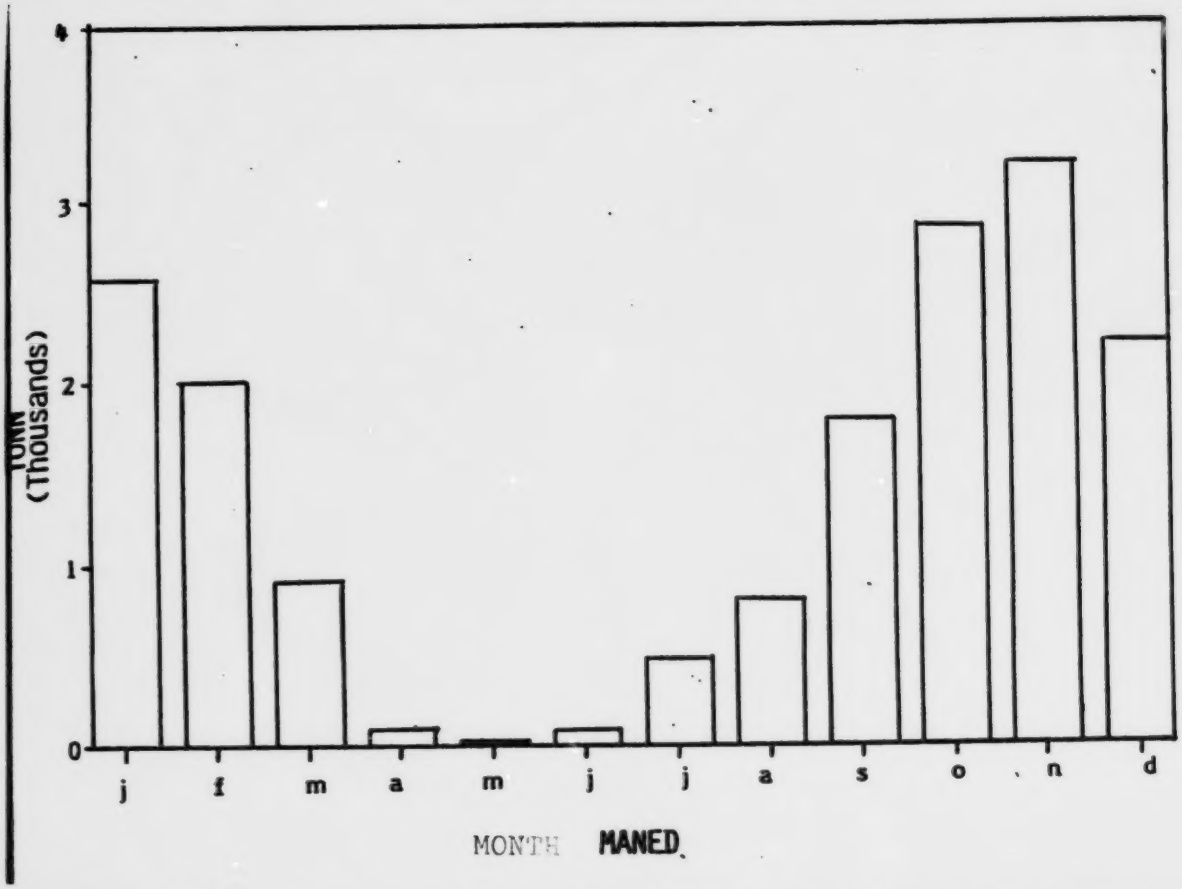



Figure 18 Yearly variations in Icelandic scallop production

Icelandic scallop resources are today fully exploited. It also seems that the potential to find new stocks has been pretty well exhausted. Exploratory cruises were undertaken in 1986 to search for new grounds, but the results were negative. Maximum quotas (TAC's) and vessel quotas are reinforcing my beliefs that we should not expect to have any unpleasant surprises with respect to the Icelandic production volumes.

With this we are finished with Europe for now and jump over to Australia on our way back to the American continent.

## 8. Australia

Australia was until recently an important supplier to the U.S. market. Exports were at the highest ca. 3000 tonnes product weight with most of this going to the USA. In recent years, exports have been reoriented towards France and especially Hong Kong, which today is the largest single market for Australian scallops. The size of Australian scallops is in between Iceland scallops and sea scallops; i.e. somewhat larger than the Norwegian product. Australian scallops has an excellent reputation for good quality both in the United States and in France. However, resources are in decline and strict regulations have been implemented to ensure rebuilding of the stocks. In the short term we therefore do not expect that Australian scallops will have much importance for the market situation for Norwegian scallops. Potentially this resource can yield close to 4000 tonnes product weight a year which would place it among the 5-6 largest on a world scale. If the cyclical pattern seen earlier will be followed also in the future, this should be the start of a 8-10 year period with low production in Australia.

Finally in this discussion of the competitive situation for Norwegian scallops I will move to the part of the world that is chiefly responsible for the market problems facing us today, namely North America.

## 9. Canada / USA - Sea Scallops

### The Resource.

Most of the North American scallop production originate from an area and a stock that is shared between Canada and USA. The most important fishing area is Georges Bank on the Northeast coast of the USA (the Southeast coast of Canada).

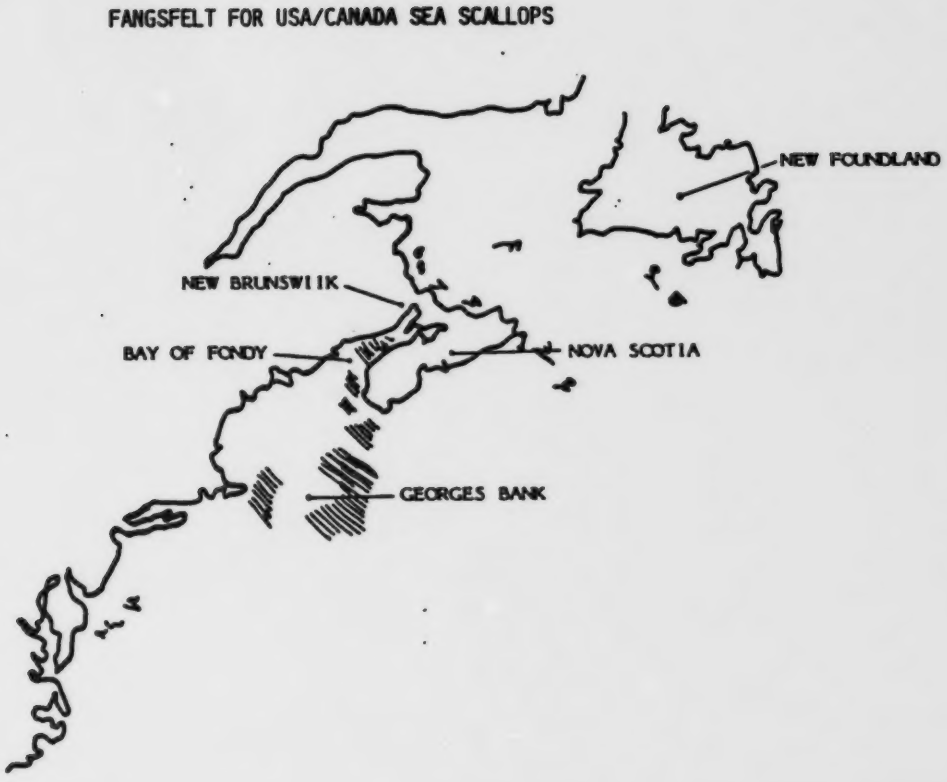



Figure 19 Important fishing areas for sea scallops - Georges Bank

In addition to the principal fishery on Georges Bank, there is a Canadian fishery in the bay of Fundy and a corresponding American fishery along the Northeast coast down as far as new York. Both these fisheries can yield 3-4000 tonnes product weight in good years. However, most of the uncertainty and problems on the scallop markets are associated with the Georges Bank resource which is the worlds largest natural scallop stock. To understand the sharp drop in scallop prices that occurred in 1987, one cannot ignore this resource. We will return to this a little later. Let us first look back to see how the production has been on Georges bank. This will also improve our understanding of the situation we are now facing.

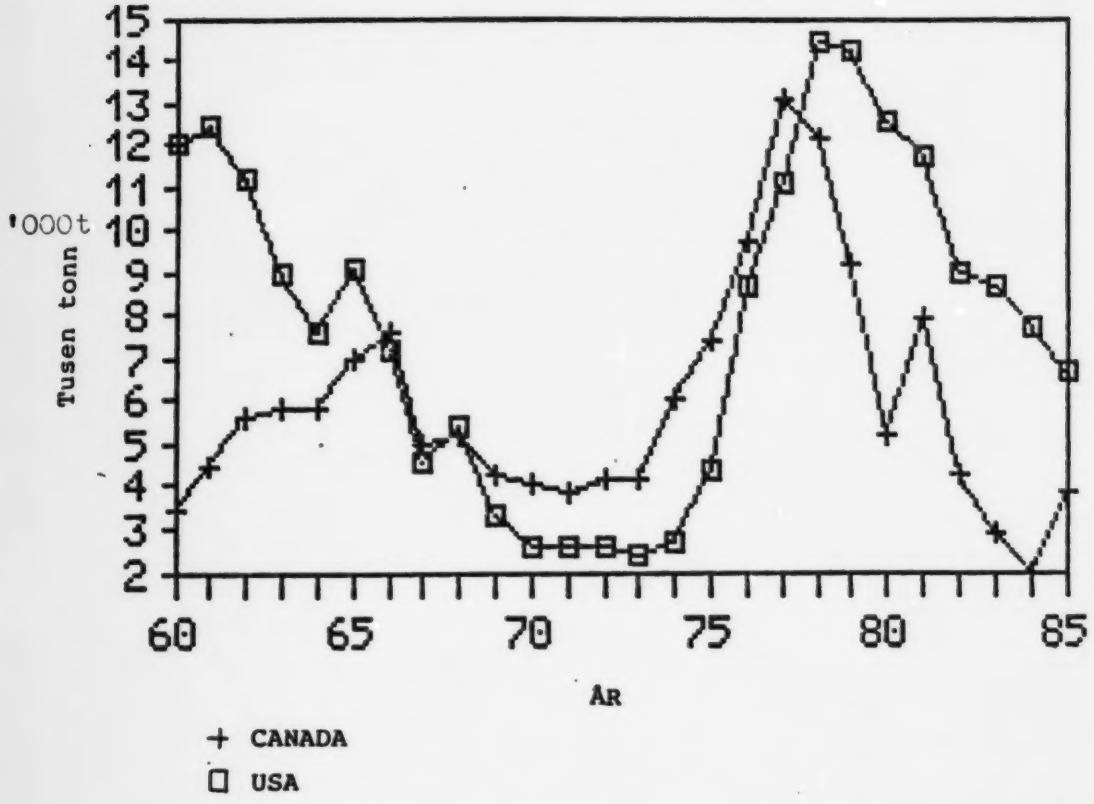



Figure 20 American / Canadian production of sea scallops, (*Placopecten magellanicus*) in the period 1960-1985

What has happened in 1987 is that the 1982 yearclass has entered the fishery in full force. In 1985 is was determined that the 1982 yearclass was the largest that had been registered since systematic resource surveys started in 1975. Since then the 1983 and 1984 yearclasses have also been found to be well above the averages for the past few years. These yearclasses will enter the fishery in respectively 1988 and 1989. It therefore seems to be obvious that the scallop fishery on Georges Bank will give a high yield also in 1988. Looking back at earlier years, I think it is quite likely that we are in a period with high production of sea scallops that will last for 5-6 years.

Substitution (p.41)

Is the sea scallop a competitor to the Norwegian Iceland scallop? It has been claimed that we are dealing with a larger species so that the competitive pressure from this species is less than from other species.If we had been discussing a product that by the market was considered to be sufficiently different from Norwegian scallops, we could forget that product and use the limited resources to watch over and analyze other aspects of the market. The figure below shows the approximate size distribution of the production from this scallop resource.

| Size STR. KATEGORI (stk/pund) nos/lb | 1984 (%) | 1985 (%) | 1986 (%) |
|---|---|---|---|
| 71 | 20,5 | 11,2 | 0,6 |
| 51 | 16,9 | 21,1 | 4,1 |
| 42 | 10,8 | 19,7 | 12,5 |
| 35 | 6,9 | 13,6 | 20,9 |
| 30 | 5,5 | 8,7 | 22,5 |
| 27 | 4,6 | 5,7 | 11,0 |
| 24 | 4,1 | 4,2 | 9,6 |
| 22 | 3,7 | 3,0 | 5,5 |
| 20 | 3,0 | 2,1 | 2,8 |
| 18 | 2,5 | 1,7 | 1,7 |
| 17 | 2,0 | 1,3 | 1,1 |
| 16 | 1,8 | 1,1 | 0,8 |

Figure 21 Size distribution of Canadian scallop production

We feel that we have demonstrated that it is not correct to conclude that scallops from Georges bank are too large or too different to have an influence on the market for Norwegian scallops. We have made a systematic study of variations between quantities produced and prices for the individual scallop varieties on the American market over the past three years. The results show clearly that an increase in production of sea scallops leads to lower prices for most scallop products; also Norwegian and Icelandic scallops.

There is therefore no doubt that Norwegian scallops and sea scallops are perceived as close substitutes by the market. The consequences of substitution can now be seen in that high

American and Canadian landings lead to price pressure on Norwegian products.

In the following we will have a closer look at important aspects in evaluating Canada and the U.S. as competitors of Norwegian Iceland scallops. In this discussion we have left out another quantitatively important resource: Calico scallops. This is done because our results indicate that this scallop variant is so special that variations in production will not have any effect on the demand for Norwegian scallops.

## Market structures

The American production has a simple market structure in that all production is sold on the home market. The Canadian scallop industry is also totally dependent on the American market. This one-sided concentration on one market has led to close to 100% of production going to the United States with only 10% used in the home market. The industry has lately been discussing the total dependency on the U.S. market and evaluated the opportunities for concentrating more on the European markets. From a processing point of view this would be possible since the scallops are shucked by hand. However, so far this discussion has not led to any noticeable exports outside the U.S. Considering geographical, cultural and linguistic similarities between the two countries, it is obvious that Canada has strong incentives for directing their efforts towards the U.S. as their principal market.

## Product quality and product form

From a quality point of view, scallops from Georges Bank are ranked as the best on the U.S. market. Many of these positive attitudes towards this scallop variant are, in our opinion, due

to tradition. The product has been on the market for a long time and this has contributed to form preferences in the American market. Scallops from Georges Bank has become a standard that scallops from other areas are evaluated against. This applies to taste, size, color, texture and possibly perceived freshness. From a processors point of view, quality is often strongly tied to freshness of the product. The market is either not aware of variations in freshness or this parameter is not being evaluated as highly, assuming that it is held within certain minimum limits. Our analysis of the harvesting process on Georges Bank indicates that these products normally should have a low score with respect to quality. The reason is that the scallop muscles are kept on ice for a long time before reaching the consumer. This period will normally last for ca. 14 days. During this period the quality potential of the product will drop. That this feature is not evaluated higher by the buyers is, in our opinion, due to poor information about the differences in the processing processes of each producing country.

Product forms from this resource are adapted to the American market. This means that practically the whole production consists of muscle without gonads. Technically both the American and Canadian industry can produce scallops with gonads for the European market. Hand shucking makes this possible. However, the difference in keeping time between muscle and gonad would make it necessary to make changes in the processing step. The length of the trips must be reduced by 5-6 days.

Preservation methods used are somewhat different. Most of the American landings are sold fresh, while as much as 90% of the Canadian export to the U.S. consists of frozen products.

## Outlook for Canadian and American production

As mentioned earlier in this section, the scallop stocks on

Georges Bank have three strong yearclasses at the present time. Projections by Canadian biologists for 1988 is for 18,000 tonnes product weight from this stock. In comparison the landings in 1986 were ca. 6000 tonnes. This, together with inspection of earlier catch cycles of this stock, gives us reason to estimate that landings will be in the 10-18,000 tonne range for 5-6 years. If earlier years scenarios will be repeated, production after this period will drop back to a level of about 6000 tonnes. The uncertainty in these estimates will, however, increase as we move forward in time.

## 8. NEW ENTRIES TO SCALLOP MARKETS

A factor affecting the competitive intensity in scallop markets is the variation in supply from existent producers. Another factor, that could become important in the longer term, is new entries into the industry. These can come about in two different ways. First, new resources can be discovered and new industries developed. Examples of this have been seen recently. Panama is a country that in 1986 reached a production volume of ca. 35,000 tonnes round weight in a year. Norway is another example that an earlier un-utilized resource has formed the basis for a world class scallop industry. In this project it has not

been possible to go into detail to study the risk of new industries developing un-utilized resources. We will therefore only mention which activities are underway world wide without evaluating the probability for establishing new scallop industries.

As an introduction we will mention that the market situation is a central factor that determines the risk of establishing new scallop industries. In periods with a weak market, the incentives for new establishments will be low. In periods with high demand and high prices, resources that otherwise would be marginal could from an economic point of view, be utilizable.

In the United States there are two resource survey programs underway, one on the East coast and one on the West coast, off Alaska. Both these resources are today utilized to a limited extent. The products from these resources are of similar size as Norwegian scallops. The resource around Newfoundland contains the same species as exploited by Norway, *Chlamys islandicus*.

The Faroe Islands are negotiating for permission to fish in the Soviet zone of the Barents Sea, and limited quotas (for one vessel) have already been achieved. If sufficient densities are found and fishing rights obtained, the Faroese fishery could be a relatively large actor in the world market. The threat from this activity is especially important in that we are dealing with the same species as marketed by Norway so that the competitive pressure will be especially strong.

Some interest has furthermore been expressed in possible resources in the South East Atlantic and in the Argentine economic zone. We have, however, not been able to obtain more precise information on the realism of these assumptions, and if it is reasonable to fear the establishment of new producers based on resources in these areas.

The most important development to watch in the future p.45 is, in our opinion, the development of new <u>rearing methods</u> for scallops. A number of countries across the world have activities

underway aimed at establishing an industry. The potential of scallop aquaculture can be seen in the Japanese success. In a 20 year period, the Japanese production of farmed scallops has increased from 0 to 150,000 tonnes a year. From these numbers it is clear that if one or more countries achieve a breakthrough in scallop farming, it could have really dramatic consequences for the profitability of harvesting wild stocks.

The following countries are definitely known to have research programs aimed at developing rearing technology for scallops:
Spain, France, Great Britain, Norway, USA, Canada, Peru, Panama, Mexico and Australia.

Other countries can also have activities underway in this area without being registered in publications available to us. This applies especially to the Asiatic countries (China, Singapore, Thailand, Vietnam).

In this report we cannot go into each individual research report to evaluate the probability of techno-economic breakthroughs. A common denominator for the results from most of these studies so far is that the economics of the projects seems to have been evaluated as relatively weak. Exceptions to this can be found, however. In 1987 it was reported on a British installation that apparently was in full operation and had production projections of 2000 tonnes by 1990. Our conclusion with respect to this activity is that with the massive efforts underway world wide, there is a real threat that one or more projects could succeed in developing viable rearing methods for scallops in the future. It is therefore important that the scallop industry closely follows developments in this area.

## 9. THE DEMAND SITUATION FOR SCALLOPS - SOME COMMENTS p.46

In this discussion of probable developments of the demand level for scallops we shall concentrate on the existing markets , the United States and France. Developments on the other markets are to a certain extent dependent on marketing efforts by the industry , and it is therefore unnatural to discuss it in isolation from our proposals for marketing strategies later in the report.

As an introduction we will present the factors that collectively determine the demand level. The scallop is seen as a somewhat luxurious product, and we therefore concluded that the general economic situation will have an effect on the demand for the product. The expected effect is that a lower economic growth will weaken demand, both on the American and the French markets.

The figure below shows some indicators for the economic situation in the United States. The numbers were generated by interviewing ca. 100 American economic experts to get their opinion on developments in 1988.

Economic outlook in USA 1988. Some key values.

GNP

Real growth 2%- Lowest since 1982.

Employment

1.8 million new jobs created in 1988. 1987: 2.8 million.

Private consumption

1% growth in 1988. Growth in 1987: ca. 2%

US-Dollar

10% fall relative to D.Mark/Yen.

Inflation

4.3% in 1988, 3.8% in 1987.

Collectively these key indicators indicate a weak decline in the American economy compared with 1987. The comparison with 1987 is, however, somewhat misleading because the economic (p.47) growth in USA that year was extremely high. However, the same economists are skeptical regarding developments after 1988. Continued growth in 1988 is to a large extent the result of measures taken by the American government to affect the economy. This policy is draining the financial reserves , so if the economy does not show autonomous growth after 1988, it can be difficult to maintain the growth level through injections from the authorities.

The conclusion of this is that the economic projections for 1988 will not in themselves create major problems for the marketing of scallops.

However, a 10% drop in the value of the dollar will increase the competitive advantage of USA and Canada even further. The outlook for 1989 is more uncertain. A decline in growth can from 1989 and beyond lead to a weaker demand for scallops.

The French economy is relatively stable at the present time, and changes that may affect the demand level are not expected.

With respect to health kick and seafood trend as determinants for seafood consumption , there are no indications that these trends are declining.The United States had in 1987 a continued growth in the consumption of seafood. These trends can, however, flatten out both "by themselves" and as a result of counter measures from the agricultural sector.

These are developments that have to be monitored since it is difficult to give good projections for these trends.

## 10. THE INDIVIDUAL SCALLOP MARKETS (p.48)

In the following we will give a short summary of the two most important markets for Norwegian scallops: USA and France as a background for the strategic part of the report. For a more detailed discussion of these markets we refer to the main report of the market analysis.

What quite quickly becomes apparent in working to get an overview of the world 's scallop markets is how few really large markets exist. Three large markets alone account for more than 90% of consumption even if these markets only comprise ca. 10% of the world population. The questions asked are then why this is so, and what is the reason? An obvious factor is then the income levels in the various countries. The scallop is a highly prized luxury product consumed chiefly in restaurants, so as a beginning it can assumed that high income is a necessary prerequisite to find areas with high consumption of scallops. It is probably so in most cases. Both USA, Japan and France are among the wealthiest countries in the world. However, this high income hypothesis does not explain why scallop consumption is so low in countries like West Germany, Italy, Spain and the Scandinavian countries.

The next attempt at an explanation can be that a large population in itself can result in a high scallop consumption. However, on closer analysis this explanation does not seem valid either. Italy and Great Britain have about the same populations as France, West Germany has ca. 5 million more people and Spain has with their 35 million people a high enough population basis to be a considerable scallop market if per capita use had any meaning.

A last attempt on an explanation could be a connection between high seafood consumption generally and high scallop consumption. This theory does not pan out either on further analysis. Japan is at the same time a large consumer of seafood

generally and a large consumer of scallops. On the other hand, the United States is one of the lowest consumers of seafood per capita of industrialized countries.

There is a common thread that may give a plausible explanation for why some countries have a high consumption of scallops while others have not. Looking at Japan, France or USA it can be seen that each of these countries have coastal scallop stocks of some size and that have been exploited for some time. Traditionally most of the consumption of scallops took place in these regions, but consumption gradually spread also to other regions. Traces of this process can be seen even today. In the United States scallop consumption in the New England area is significantly higher than in other regions of the country. Similarly, the coastal areas in Normandy and Bretagne have a higher per capita consumption than the rest of France. The lowest consumption is found in regions that are geographically distant from harvesting areas. This pattern has historic reasons. In our days the interaction between countries are much higher so that food habits can easily cross borders to other countries. Distribution systems have become so effective that they no longer a limit to reaching the markets that might be of interest. The consequence of this is that I dare to propose the hypothesis that any Western country potentially can be developed to be an interesting market for Norwegian scallops. The task, which we will return to in the strategy section, will be to choose target markets and develop strategies for developing these markets.

In the rest of this part I will concentrate on some central features of the two markets that up to now have been the world's principal importers of scallops: France and USA. Another market area that in our opinion has the potential to be an important buyer of Norwegian scallops :the rest of Europe. For a description of this we refer to the report on market- and competitor analyses that have been carried out.

## 11. SOME IMPORTANT FEATURES OF THE FRENCH MARKET

France is at the present time the only large scallop market in Europe. The country has in recent years had a consumption of between 3500 and 4000 tonnes product weight. This consumption consist of three different product categories : Whole, live scallops, shucked meats with gonads and shucked meats without gonads. Quantitatively developments have been in two directions. The consumption of frozen scallops declined from ca. 4100 t to 1850 t in the period 1980-86. The consumption of fresh or live scallops also declined somewhat. For this product variant the quantity imported has remained constant.

I do not believe that we can explain the drop in quantity in France with a lower demand on that market. It is doubtful that Frenchmen practically overnight have lost their taste for scallops. Scallop dishes of various kinds have a firm place in the French diet. The decline in consumption is rather due to unusual strong demand and import requirements on the American market in this period. This in combination with lower resources in one of the important supplier countries (Australia) explains most of the decline. The 1987 statistics will probably show that this negative trend has been reversed as a result of a weaker U.S. market.

French imports of scallops consist chiefly of two separate product groups ; frozen and fresh scallops. The frozen products that are imported are standardized bulk products or semi-processed products. The products themselves are shucked scallops, principally with, but also without roe. The products are commonly frozen singly (IQF) and glazed, but block frozen products are also sold in the market. The imported products differ from each other in that they are sorted in different size groups, and that they belong to different biological species.

In addition to the imports of fresh and frozen scallops, the market is also supplied with live animals in the shell from their

own fisheries. With respect to the connection between the live- and frozen scallop market segments, we believe that the supply in a segment has little influence on the price formation of the other segment. One reason is that the products have different uses by the final consumer. The live scallops are chiefly eaten raw, while the shucked products (fresh and frozen) are prepared and therefore are served in a form quite different from the live scallops. Secondly, the distribution of live scallops is different from the frozen ones. The live animals in the shell are distributed through wholesale markets to the restaurant (P.51) trade, while large parts of the frozen imports are repacked at frozen food distributors and then shipped directly to supermarket chains and frozen food chains.

With these comments as background, we hereby present in the following a survey of French scallop imports in recent years.

## Total French imports of scallop products

French imports of scallops can as mentioned above be divided into two groups: fresh and frozen. The most important imported frozen product is individually frozen meats (muscle) with gonads. Imports of individually frozen meats without gonads have also been reported, but preferences are clearly in the direction of muscle w/ gonad. There are also some imports of block frozen products. These three product forms will regardless be quite close substitutes , so that it makes sense to discuss them together. The most important fresh imported products are shucked meats with gonads, packaged in 2 kg polyethylene bags, most often in brine, and live scallops.

The other fresh imported product is fresh, shucked meats.

Figure 22 below shows the French imports of frozen scallop products for the period 1980-86.

Please note that the author or FTFI obviously inserted the wrong figure for Fig.22. The figure is supposed to show imports of frozen scallops, but instead it contains a graph of average or monthly prices (FF/kg). The discussion following therefore does not make sense if the reader attempts to match the numbers in the discussion with the figure. The values in the text and those in Table 1 appear to be correct.

Translators note.

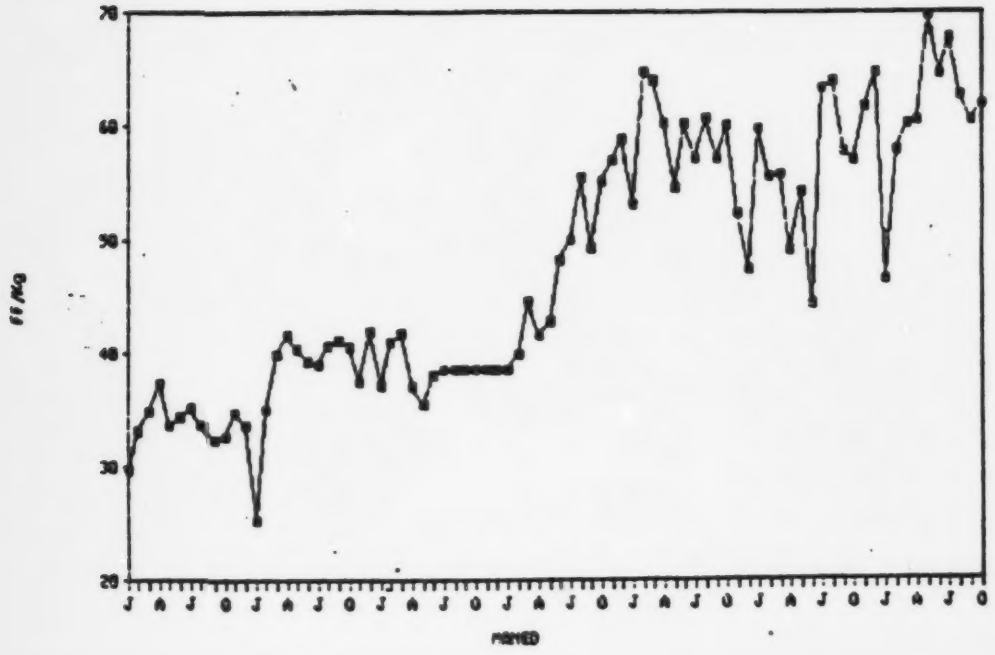


Figure 22 Total imports to France of frozen scallops, 1980-86.

The figure seems to show that two features have (p.52) in particular characterized French imports of frozen scallops in this 7-year period. First, imports have shown a steady decline. Imports in 1980 were over 4000 t. In 1986 imports dropped to under 1900 t, or under half. Table 1 below shows imports by year in this period.

Table 1. French total imports of frozen scallop products in the period 1980-1986.

| År | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|---|---|
| Mengde (Tonn) | 4071 | 3828 | 3941 | 3175 | 2867 | 1887 | 1850* |

* Based on extrapolation from the first 10 months of the year.
Source: Direction Generale des Douanes et des Droits Indirects.

The other feature that should be noted is that figure 22 shows a relatively stable pattern of imports throughout the year. The regularity that most clearly stands out is that the months January and February clearly have the lowest volume of imports for all these years. We interpret this as confirmation that scallops are perceived as a luxury product, and that consumption therefore is lower in these months. This can be compared with the marketing dynamics for salmon. The demand for salmon in France is lowest in the period just after Christmas. The reasons for this are that people are reverting to a more sober lifestyle after the excesses of the holiday season and also that February is one of the two months when Frenchmen pay taxes. Another factor that can contribute to a lower import demand is that a French fishery is carried out in these months. However, we do not believe that there is a close connection between the import demand for frozen scallops and French landings. First, the self sufficiency is low as compared to the total consumption. Second, most of the French landings are marketed live, and finally, this fishery is carried out for 8-9 months without appearing to have any effect on imports.

The other regular feature noted is the peak in imports in the months May to August. This is probably related to changes in eating habits in the summer months. The fact that French fishing is stopped in these months could also have some effect on imports.

The figure below shows the quantitative development in French imports of fresh scallops in the period 1980-1986.

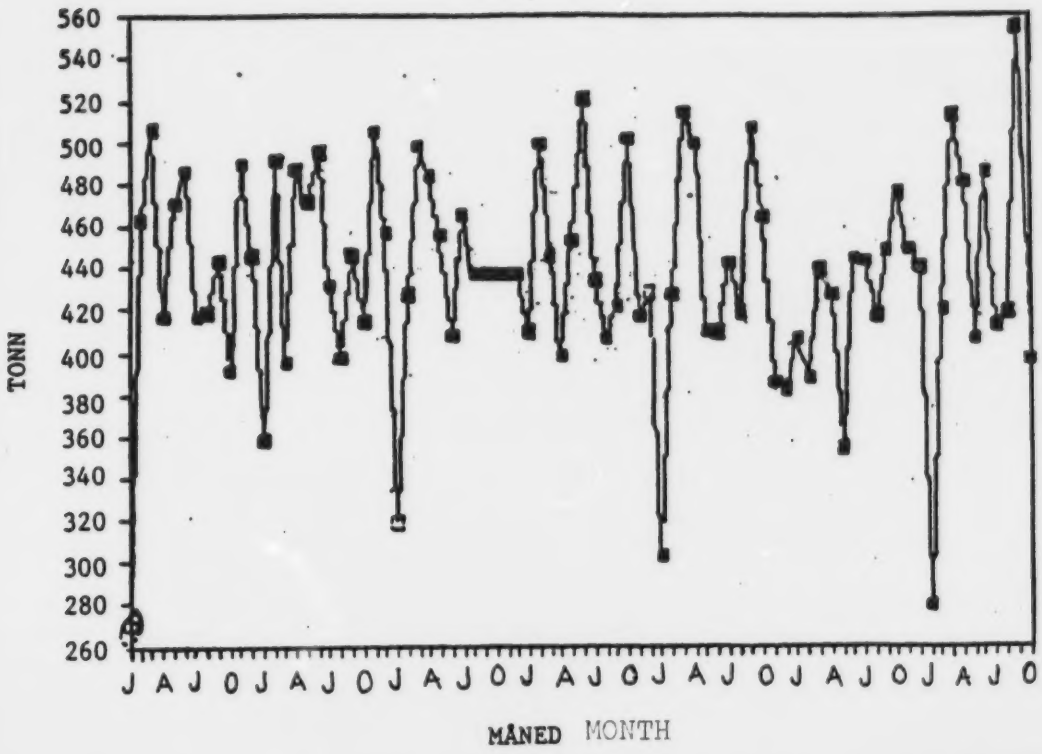



Figure 23 French imports of fresh scallops, 1980-1986

The figure shows that the imports of fresh scallops have been quite stable in the period. With the exception of the January values, monthly imports have been between 400 and 500 t in the whole period. The only pattern that seems to stand out is that January imports are somewhat lower than in the rest of the year . January values were about 300 t for the period.

Table 2 below shows how imports per year have developed in this period.

Table 2 French imports of fresh scallop products in the period 1980-86.

| Year | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|---|---|
| Quant(t) | 5218 | 5388 | 5626 | 5339 | 5210 | 5141 | 5244* |

* Based on the first 10 months of the year.

Source: Direction Generale des Douanes et des Droits Indirects.

As shown in the table, the import values for 1986 are almost identical with those for 1980. This indicates that the demand for fresh scallop products has been steady in the period from 1980 to today.

The figure below shows price developments for the same period.

Prices show a clear cyclical pattern. The lowest import prices occur in the period July-October/November. In this period prices can be as low as one half the highest prices for the year. Throughout the fall prices tend to increase, and are at their highest in January-April.

Considering the period as a whole, it can be seen that average prices have increased. The minimum prices in 1986 were ca. 14 FF/kg, while in 1980 they were 8 FF/kg. This gives an increase of average prices of ca. 75%.

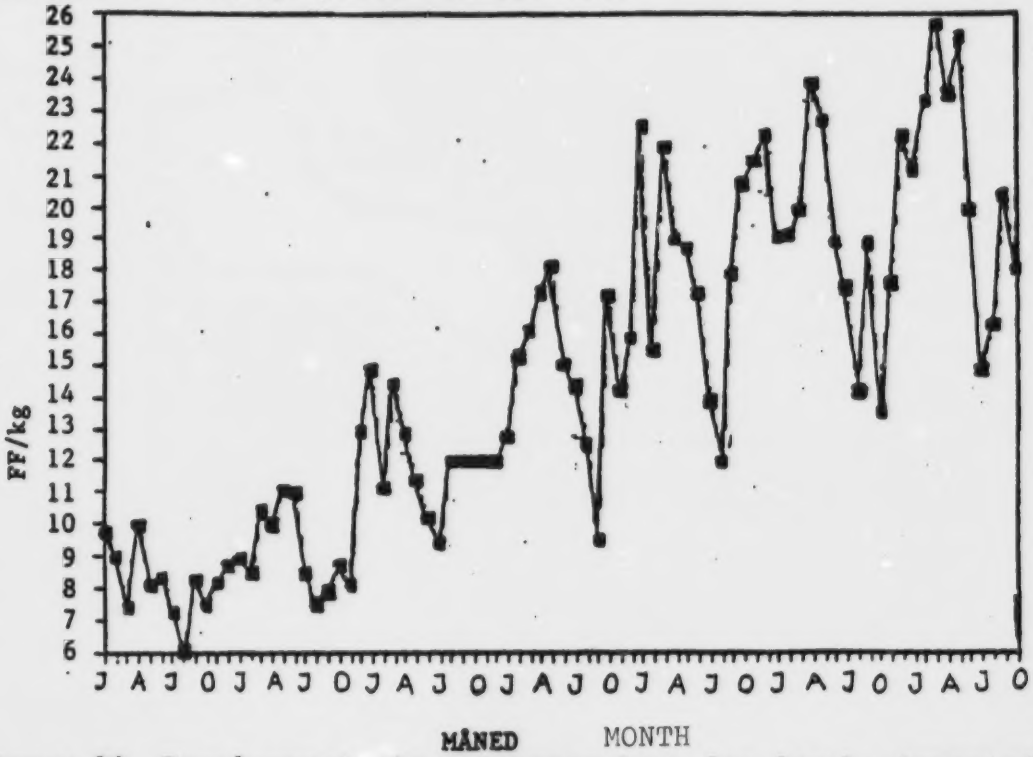



Figure 24 Developments in average prices for fresh, imported scallops in the period 1980-86.

Maximum prices in 1986 were 25.75 FF/kg (in February), while they were ca. 10 FF/kg in 1980. This represents an increase of ca. 150%. The average price for the whole year was 21 FF/kg in 1986, while in 1980 it was 8.10 FF/kg or an increase of ca. 160%.

These values must, as mentioned above, be interpreted (p.55) with caution, because the composition of imports can be different, both for the year and for the period. A higher percentage of shucked scallops towards the end of the period can have strengthened the impression of an increase in the average prices.

A possible explanation for the low average prices in the summer/fall period can be that the proportion of live scallops from the UK and Ireland is especially high then. The reason for the high proportion of live scallops is that the French fishery is closed in this period.

## MARKET PARTICIPANTS AND MARKET SHARES

A number of countries are in the French market as exporters. The composition of the most important suppliers has, with a couple of exceptions, been stable in the 7 year period. The composition of fresh product suppliers is naturally somewhat different from that of the frozen product suppliers since geographic distance plays an important role in the supply of fresh products.

In 1985 the following nations exported frozen scallops to the French market;

Table 3 Suppliers of frozen scallops to France.

| Country<br>Land | Quantity, tonnes<br>Mengde (Tonn) | Market share(%)<br>Markedsandel (%) |
|---|---|---|
| U.K. | 987.1 | 52% |
| Japan | 360.9 | 19% |
| Australia | 179.4 | 9.5% |
| Peru | 105.9 | 5.6% |
| Island Iceland | 103.2 | 5.5% |
| New Zealand | 47.1 | 2.5% |
| Chile | 36.7 | 1.9% |
| Grønland Greenland | 26.4 | 1.4% |
| Norge Norway | 9.1 | 0.5% |
| USA | 7.9 | > 0.5% |
| Thailand | 5.3 | > 0.5% |
| Andre land Others | 18.5 | 1% |
| Totalt | 1887.5 | 100% |

source
Kilde: Rise (1986)

It can be seen from the table that the five first (p.56) exporting nations together accounted for ca. 92% of French imports of frozen scallops to France in 1985. The United Kingdom is decidedly the largest single supplier with 52%.

By comparing the 1985 values with imports in 1980, it can be seen that some changes have occurred in the composition of the imports. In 1980 the U.K. only accounted for 36% of the import volume. Exports were then over 1460 t ; ca. 500 t more than in 1985.

However, Japanese exports were over 1600 t which gave the country a market share of ca. 40%. In 1985 Japanese exports had dropped to 361 t and the market share to 19%.

Another country, Brazil, has practically disappeared as an exporter of scallops to France, while Australia has reduced its exports of 391 t to ca. 179 t in 1985.

The most important exporter nations that have entered the

French market since 1980 is Peru and Norway.

The French market for shucked scallops is of most interest for the Norwegian industry at the moment. This market consists of two parts that can be considered to be quite separate according to our studies: The market for scallops with gonads and the market for scallops without gonads (meats only). The figure below shows the chief characteristics of the French market for scallops.

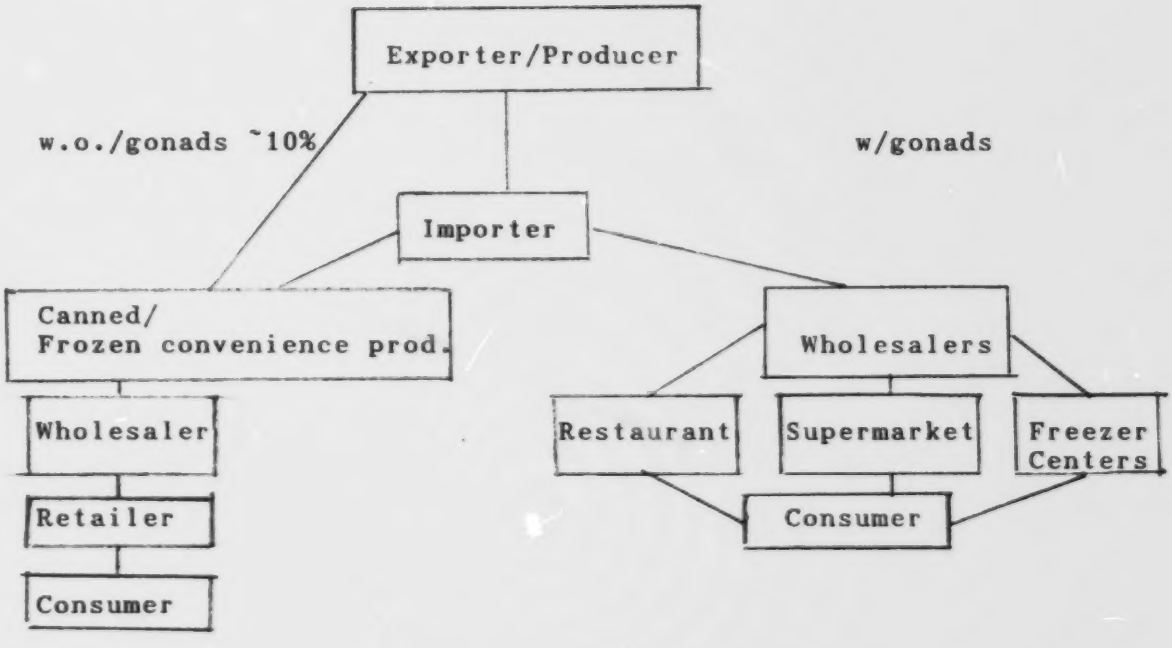



Figure 25 Chief characteristics of scallop distribution in France.

The figure indicates that these two product variants go for two different end uses. Supply in one segment has therefore no special effect on price formation in the other.

The largest market by volume and by value is for scallops with gonads. This market consists of the restaurant and the retail markets. Consumer packed, frozen scallops have a wide distribution in the French retail market. In a limited study that we carried out, we found that all retailers visited had this product. The French market is today the largest in Europe. That scallops have a wide distribution, and that they are so well established in the French diet, also means that attitudes to the form the product is presented are strong. Interviews with French importers and wholesalers indicate that it can be very difficult to have a product without gonads accepted by the majority of the French market. A French study concluded that the various size categories have their well defined buyer categories. These are distributed as follows:

5-7/lb are purchased principally by retailers for sale to consumers.

8-12/lb are purchased by restaurants and hotels.

20-40/lb are purchased by supermarket chains and freezer centers.

40-60/lb are purchased by secondary processing plants and traiteurs (enterprises that prepare fresh delicatessen of various kinds/ delicatessen outlets).

The same study explained the preference for small scallops by the secondary processors by their comments that the large scallops had to be cut up before being processed.

The Norwegian processing technology is today only able to

service the market for shucked meats without gonads. This market has traditionally consisted of a handful processing plants that use scallops without gonads as an ingredient in finished consumer packs (chiefly first courses au gratin). In 1986 this market comprised according to our estimates ca. 4-500 t on a yearly basis, or 10-15% of the total scallop market in France.

In the last half of 1987, France has been the most important market for Norwegian scallops. The reason for this has of course been the low prices obtained on the U.S. market. Several (p.58) of the large producers in the world have concentrated their efforts solely on USA, and this means that prices in France have temporarily been higher than in USA.

The potential for developments in the French market can appear to be in the development of the market for prepared consumer dishes. Preferences for scallops with gonads in the consumer markets are so well established that it would require large resources to attempt to change these in the direction of a product without gonads. The development potential in the French market in total is therefore in our opinion limited. A large part of the Norwegian scallop exports is today used as raw materials for the canning industry. This part of the market has for many years worked with declining markets, low profitability and a generally poor reputation for quality. To claim that the canning industry is on its way out would be too strong a statement, but it is difficult to doubt that growth in this sector will be weak in years to come.

Frozen finished products have , however, been a growth sector in France since the beginning of the 1980's. In the future cultivation of the processing sector in France, it would for that reason be strategically correct to develop sales towards this sector of the market.

# 12 SOME IMPORTANT FEATURES OF THE AMERICAN SCALLOP MARKET

## 12.1 Supply and suppliers

USA is the largest single market for scallops in the world. In the period 1980-85 the average yearly consumption has been ca. 30,000 t product weight. This corresponds to ca. 300,000 t live weight per year, or nearly 50% of the total quantity world wide. Imports have in the same period varied from 9500 t to 19,100 t. Imports can be said to have increased in recent years above average imports in the previous 5-year period (11,700 t). However, the difference is not large (ca. 2000 t/year), and it is not statistically significant ($2 > p > .15$) at a satisfactory level. A common assumption with respect to imports is that they substitute for domestic production when domestic landings are low. The correlation between US landings and imports is weak, however, so the explanations given for the fact that USA in some years imports much or little are really much more complicated. Projections of American landings are not in themselves enough to predict import requirements. The correlation is somewhat better when landings of Calico scallops are excluded.

With the exception of England and Australia in later years, USA is the principal market for all scallop producing countries in the world.

Iceland exports between 95 and 99% of their production to the US. The Latin-American countries have a similar distribution. Japan has a high domestic consumption, but probably 85 to 90 of exports go to the US. Canada exports practically nothing to other countries than the US (1983: 99.85%). In the short term this pattern will stay the same. In the best case it will take several years to build up new markets, and as of today there are no alternatives to the US market for scallops. A consequence of this is that exports to the US quite slavishly will follow the scallop production in each producing country with the effects this will have for price levels. The only alternative in the short term is

to stop the fishery.

The table below shows which countries exported to the USA in 1984,, 1985 and 1986 (to November).

Table 4 Individua. country shares of scallop imports to USA

| LAND Country | 1984 Quant. Kvantum | 1984 Share Andel | 1985 Kvantum | 1985 Andel | 1986 Kvantum | 1986 Andel |
|---|---|---|---|---|---|---|
| Argentina | 285 t | 2.3% | 137 t | <1% | 25 t | 0% |
| Australia | 546 t | 4.4% | 310 t | 1.6% | 33 t | 0% |
| Canada | 3940 t | 32% | 5355 t | 28% | 5974 t | 30% |
| Iceland Island | 1472 t | 12% | 1831 t | 10% | 1700 t | 8.5% |
| Japan | 3266 t | 26% | 4937 t | 26% | 4956 t | 25% |
| Norway Norge | -- | -- | 68 t | 0% | 497 t | 2.6% |
| Panama | -- | -- | -- | -- | 3328 t | 17% |
| Peru | 1320 t | 11% | 5154 t | 27% | 1897 t | 9.5% |
| England | 554 t | 4.5% | 478 t | 2.5% | 331 t | 1.6% |
| Other Andre | 986 t | 8% | 797 t | 4.2% | 1303 t | 6.5% |
| TOTALT | 12370 t | -- | 19067 t | -- | 20039 t | -- |

The table shows that nine countries supplies 92-96% of the US imports of scallops. Five other countries: Argentina, Chile, Denmark, Thailand and Mexico had in the same period collectively between 3 and 8 % of the imports. In addition, the US imported very small quantities from 20 or so other countries. A limited number of countries therefore supplies most of the scallops imported by the USA.

For these three years, three exporting countries have supplied between 70 and 82% of the imports. Of these Canada and Japan have had a stable market share; partly a reflection of a stable production level in these countries. Peru, however, was the second highest exporter only in the peak year 1985. Both in 1984 and 1986 exports from this country were much lower. The same applies to Panama that had practically no exports in 1984 and

1985, but then had a big increase in 1986 up to 17% of the total US imports. In Peru, the swings were due to variations in the resource base for the scallop species caught. The year 1985 was the peak year due to favorable climatic conditions for recruitment and growth (El Nino). In the case of Panama, the growth of exports seems to be due to the discovery of a new scallop resource and the opening of a new fishery. It is still too early to say at which level the scallop production in Panama will stabilize.

In addition to the imports, the American scallop market is supplied from two large and one smaller national scallop resources: Sea scallops, Calico scallops and Bay scallops. Of these species, the Sea and Calico scallops are the most important.The table below shows the quantities produced of these scallops in recent years.

Table 5 The US production of scallops in the period 1976-85 (t).

Year

| År | Bay | Sea | Calico | TOTAL |
|---|---|---|---|---|
| 1976 | 721 | 9005 | 1027 | 10755 |
| 1977 | 701 | 11727 | 505 | 12933 |
| 1978 | 622 | 14051 | 430 | 15103 |
| 1979 | 805 | 14273 | 391 | 15469 |
| 1980 | 439 | 13042 | -- | 13481 |
| 1981 | 304 | 13734 | 6641 | 20679 |
| 1982 | 807 | 9673 | 4994 | 15475 |
| 1983 | 1061 | 9289 | 4357 | 14707 |
| 1984 | 784 | 8358 | 17840 | 26982 |
| 1985 | 604 | 7180 | 5676 | 13460 |

The table shows that the production of sea scallops had a period with high quantities in 1977-1981. In more recent years up to 1985 the production has been lower, but it has increased again in 1986 and 1987 due to the better resource situation. The largest variations have taken place for Calico scallops. It can be seen from the table that the USA production more than tripled from 1983 to the record year 1984. This species is rapid growing with only one year class in the harvestable and recruiting part of the stock at any time. The fishery (and recruitment) is therefore very dependent on one year class which will result in violent swings in quantities produced. Up to November 1986 the production was only 500 t, i.e. less than 10% of the quantity in 1985. Values for 1987 are not available, but reports from USA indicate that catches were low also in 1987.

The US catch in total has been between 10,500 and 27,000 t product weight in the period 1976-85. This places the US scallop industry as decidedly the largest actor in the market. The quantity corresponds to a share of 50-70% of the total market.

As we will discuss in more detail later,it is probably just as correct to consider the US scallop industry as two groups of suppliers. Calico scallops are different from the other scallop species in that they are considerably smaller. According to an American study, muscle sizes varied from 144 to 303 pieces per pound. The end use for these small scallops is therefore quite different and substitutability with other species is lower. This has as consequence that the price level for Norwegian (p.62) scallops is not affected to the same degree by variations in the Calico production as f.inst. variations in the production of Norwegian scallops.

To sum up, the US scallop market has 7 principal suppliers of scallops: the US Sea scallop industry, the US Calico industry, Canada, Iceland, Japan, Panama and Peru. From what is known about the Norwegian fishery up to now, Norway will take a place among the 3 top export nations. It is too early to say if the number of

participants in the market will change. From American importers we have received signals that countries like Korea and Singapore have started exporting to the US. At the present time we have no information on how large this production is and if it will be there in the future.
It is also uncertain if the exports from Panama can be counted on in the future.

The latest information we have from the US market is that China has entered the market strogly as an exporter of scallops in 1987. So far we only have statements from the importers to support this and also observations of the products. The supply of Chinese scallops seems to be good, according to a handful of American importers. The quantities should become available before this study is completed. Observations in the US indicate that the Chinese have adopted industry standards with respect to the product (5 lbs single frozen ,IQF) and that the products seem to be of good quality. It is so far not known if these products come from aquaculture operations or from harvesting of wild stocks.

## 12.2 Principal features in the distribution and utilization of scallops in USA

Similar to the French market , the American market can be divided into two relatively divided parts: The market for natural products and the market for breaded products. The figure on the next page shows principal features in the distribution of scallops in USA.

As shown in the figure, the distribution channel for natural products often consists of an importer link/producer link , one or two wholesaler links and a retail link. It is similar for breaded products, but in that case there is a processing link between the importer- and wholesaler link. The two channels

represent two qualitatively different markets. These differences will be discussed later when discussing possible target groups in this market.

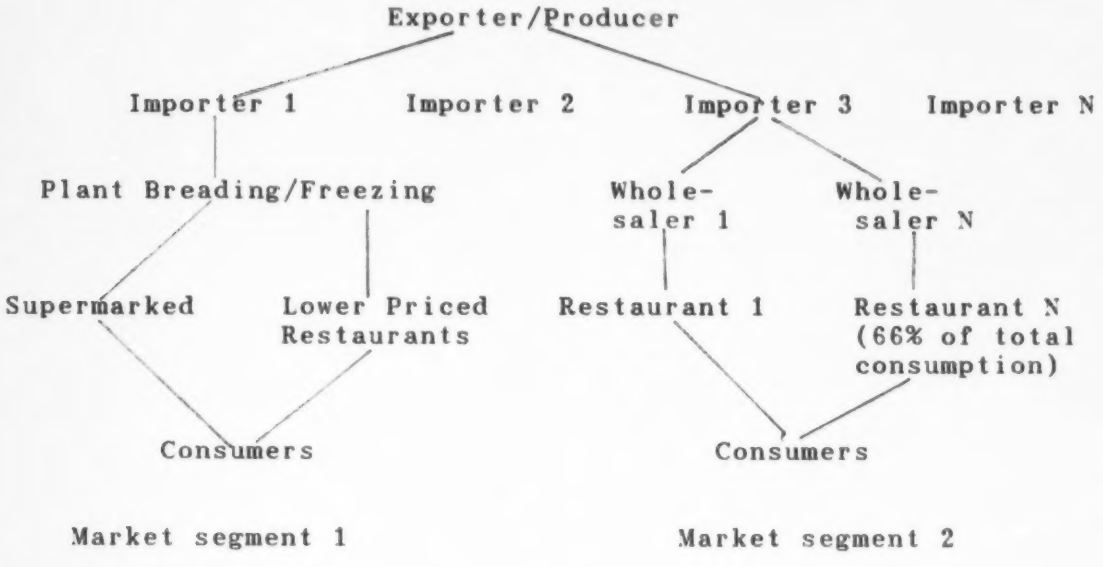



Figure 26 Principal features of scallop distribution in USA.

A characteristic of the American scallop market is that a large part of the total consumption takes place in restaurants. This part has been estimated to be 64-80% of the total consumption.

There are large regional differences in scallop consumption in the US. The table on the next page shows consumption by area in USA.

Table 6 Scallop consumption in USA- by region

| Region | Share of population(%) | Weighted consumption |
|---|---|---|
| New England | 19.7 | 216.7 |
| Mid-Atlantic | 40.0 | 352 |
| Southeast | 3.3 | 22 |
| The Gulf | 6.7 | 38.2 |
| The Great Lakes | 13.3 | 99.0 |
| East Central | 2.8 | 30.2 |
| West Central | 2.8 | 15.5 |
| Southwest | 8.6 | 69.7 |
| Northwest | 3.1 | 27.6 |

It can be seen that the New England and Mid-Atlantic regions have by far the highest total and per capita consumption in the country.

In addition to these regional differences there are also large demographic differences in consumption. The table below shows the connection between some demographic variables and the scallop consumption.

Table 7 Summary of connection between demographic parameters and scallop consumption in USA.

| Variable | Connection with consumption |
|---|---|
| Income | High income-high consumption |
| Region | High consumption in New England and Mid Atlantic, intermediate in Great Lakes<br>Low consumption in Central regions |
| Population density | High consumption in densely populated areas |
| Occupation | Employees ("white collar workers") higher than laborers |
| Education | Higher education-high consumption |
| Race | Whites more than blacks, "other races" more than 5 times as high as whites |
| Season | High season in summer |
| Restaurant/home | 66% of consumption in restaurants |

As shown in the table ,the scallop consumption in USA has been demonstrated to be connected with various demographic parameters. The results generally confirm the luxury profile that scallops have on the American market. The scallop is a product reserved for the few. This can be seen from another American study where only 3% of those asked (more than 7000 households) said that they had purchased scallops for use at home in 1981.

The scallop consumer in USA has high income, he has high education, he lives in regions with high material standards.

(p.65)

## 13 SCENARIOS FOR THE FUTURE OF THE SCALLOP INDUSTRY

In the following sections we will present two alternative scenarios for the scallop markets with associated consequences for the industry: A pessimistic scenario and an optimistic scenario. These visions of the future must not be mistaken for projections for the future market situation. In the scenario presentation we have built on possible key factors involved. Projections are also based on situation descriptions, but contain in addition the very essential element probability that the situation will be reached in the period the projections cover. We have not attempted to estimate these probabilities. However, it can be a useful drill for the industry members themselves to attempt to give subjective (and necessarily uncertain) estimates for these.

In the scenario descriptions we use as a basis the factors that determine the competitive intensity in the scallop markets. We perceive these factors as the most important determinants for what we have called "competitive intensity", but which could just as well be called the market situation, price levels, demand etc. The objective is to show how the situation in the industry depends on these (chiefly external) conditions.

1 . The pessimistic scenario

The pessimistic scenario for the competitive intensity in the scallop markets will,from a Norwegian point of view, be strongly influenced by coincidental negative developments of key factors described above.

The United States is experiencing a long lasting and substantial economic recession. The principal reason for this situation is Washington's economic policies that have depleted the American currency reserves. This policy was used to counter the effects of the stock market crash in October 1987 which really was only a symptom of the conditions in the American national economy. In spite of these policies, one has not succeeded in creating autonomous economic growth. Macro-economic indicators still show increasing deficits in the trade balance, falling value of the dollar, reduced GNP/inhabitant and increased unemployment. Recessions start in USA,, and the effects spread within a year to the other industrialized countries as a result of the interrelationships in the international economic system.

The consequences in industries abroad are that (p.66) importing firms, finished product processors, wholesalers and supermarked chains delay purchases because they are uncertain of what effects the negative developments will have on demand in the consumer market. This primary effect leads to slow sales and stock buildups at the producer level. Price wars follow in order to empty warehouses which again will reinforce the uncertainty and wait-and-see attitude of the buyers.

After a short time the effects of the economic recession will take effect on the consumer level.

An important consumer group, businessmen on business lunches, have stricter limits on expenditures imposed by their companies. This leads to a switch to less expensive restaurants. These restaurants are not typical scallop restaurants. In the next round, if developments don't turn around, the number of

business lunches will be reduced to a minimum.

The ordinary consumer will relatively quickly try to adjust to a lower disposable income. This is done by cutting back on less necessary expenses and concentrate consumption on more reasonable alternatives and essential products (staples).
One of the first changes made to achieve this is to reduce restaurant visits. If economic conditions go far enough in a negative direction, most consumers will cut out restaurant visits altogether from their budgets.

Collectively this will lead to a sharply weakened demand for restaurant services, and this sector will be hit with a wave of bankruptcies. The bankruptcies will erode a large part of the customer base for Norwegian scallops, and the result is sharply lowered demand.

The private consumption of food at home will also rapidly be adapted to the new income levels. In a long period of economic growth, the prices for food products have had little importance for the composition of the diet. Consumers have been able to priorize health, "in foods" and their own personal taste. As a result of tighter family budgets, consumers quickly discover that large sums of money can be saved by changing the diet. The general trend in large parts of the population is that families turn from expensive foods towards cheaper varieties. Consumers soon discover that alternatives are many and that savings on the food budget will not lead to a radical decline in the standard of living. Seafood is relatively expensive in USA and France so that there will be a trend towards increased use of chicken and other reasonably priced meat products. In the seafood sector there will be a trend away from shellfish and more expensive species towards more reasonable alternatives such as various fish fillets. (p.67)
Scallops belong to the more luxury oriented food items on this market, and it will be noticed on the demand that consumers are looking at their budgets more critically.

At one point in the 1990's , USA and Canada succeed in their

work to develop rearing methods for scallops. This new technology leads to rapid developments of an industry to farm scallops. The production volume increases rapidly, and towards the end of the century each of these countries produces 150,000 t round weight. Japan has in the meantime increased their production to 300,000 tonnes. The technology is so flexible that several European and South American countries establish industries for scallop farming. Before year 2000 the total production of farmed scallops has reached 1,000,000 t round weight. This is 60% of the total world production.

Farming of scallops has advantages that,outside the effect of the volume in itself, creates sharp competition for the wild stocks. Stable production and delivery guaranties enable this industry to carry out quality control and marketing much more effectively than industries based on harvesting wild stocks. It can furthermore give guaranties of delivery which in itself leads to large parts of the retail - and restaurant markets preferring this product.

The volume increase leads to sharp price drops for all types of scallops. At the same time as the breakthrough in farming occurred, several wild stocks have high yields which will add to the price pressure in the markets.

The consequences for the Norwegian scallop industry will be serious. Low prices lead to a dramatic fall in the profitability of the scallop vessels. The less efficient vessels will soon be bankrupt. After a while even the more efficient vessels will be unable to cover fixed and variable costs. The owners will look for alternative fishing opportunities which eventually will lead to some being permitted to fish with conventional trawls for groundfish, while the others are "flagged out" (operated under a flag of convenience) or sold abroad.

2. The optimistic scenario

The optimistic scenario will be colored by the key factors having moved in a favorable direction from a Norwegian point of view.

The whole world held their breath in and after October 1987 when the New York Stock Exchange and the other exchanges in the world experienced the largest crash in stock prices since 1929. In that period the media were full of dire predictions with respect to the effects of the stock crash. The most pessimistic appeared to expect an extensive economic crisis on the scale of the crisis in the 1930's. However, Washington showed that they understood the danger of the situation and stopped the effects on the economy by implementing an effective countering policy. In 1988 all indicators of the American economy were healthy. Growth was somewhat lower than in 1987, but way above the average for the last 5 years. The economic growth continues at the same rate towards year 2000. A strong economy in USA means a strong economy also in other industrialized parts of the world.

The economic growth has a positive effect on the demand for restaurant services. This, together with a high disposable income on the consumer level leads to a strong demand for scallops also for home use. This translates into a strongly stimulated scallop market.

At the same time the production of sea scallop shows a sharp decline. After a period with high production in the late 1980's and early 1990's, the production has now dropped back to about 6000 t /year. This can be compared with the peak year in 1988 when this resource yielded 18,000 t. The production in Peru is down after the peak year in 1985, and Panama has fished out their resources. This, together with low production in the smaller producing countries, leads to a serious undersupply on the scallop markets.

In addition to these positive external conditions, the Norwegian scallop industry starts to feel the effects of the

long-term market development efforts that have been underway for some time. On the American market important buyer groups in the restaurant trade have accepted Norwegian scallops as an unquestionable quality product. Color grading, information on the production process, freshness and a clean product has meant that Norwegian scallops are primarily reserved for the restaurant market.

In Europe we have been successful in developing strong markets for scallops in Spain and in Sweden. The Norwegian industry was there first to develop these markets. The effect of this has been that the product has formed preference, and Norwegian scallops have become the standard against which other variants are measured against.

In summary, these development trends have led to high, stable prices. Sensible resource management has meant that catch rates have been stable at the 1987-level, and the consequences in total for the industry is very good profitability.

## 14 STRATEGIES FOR TWO MARKET AREAS

Through these analyses we have come up with two qualitatively very different markets for Norwegian scallops. On one side we have the United States which is characterized by a well-established market where quality requirements and requirements of other aspects of scallops as a product are to a large degree fixed. On the other side there are many of the European markets. In markets like Italy, Spain, West Germany, Switzerland and Sweden, scallops have today very little market penetration. The two primary segments, the restaurant and consumer markets, therefore have very limited experience in the use of scallops. From this it would follow that much of the resistance Norwegian scallops are meeting in the American and French markets would not be present to the same extent in these markets. The qualitative differences, that are barely mentioned here, means that two marketing strategies must be developed: One for each market area. Scallop exporting enterprises must have two sets of objectives, target groups and action plans directed towards these two market areas. In this part of the report we will attempt to develop proposals for marketing strategies for the Norwegian scallop industry. The strategies will have several similarities and will propose goals and behavior on how exports are conducted today. Our contribution is that we bring in a more long term perspective in the marketing effort where we recommend that we attempt to influence some of the conditions for the daily export work. In the first part we present a continuous strategy, or plan, for marketing on the American market. In the second part we have put the spotlight on Europe and in particular on markets that today are only potential markets, but which we believe can be developed to be important markets for Norwegian scallops with time.

## 15 OBJECTIVES AND TARGET GROUPS FOR THE MARKET STRATEGY IN USA

In the analysis the American market was characterized as a market with extreme competitive intensity. Including the two US scallop resources, this market is the principal market for eight of the worlds largest scallop producing nations. In the short term there are no real alternatives to the US market for these producers , and the swings in the resource base leads to violent swings in the total supply. This is experienced by the Norwegian industry as swings in the demand for Norwegian scallops. These swings are extreme to the extent that Norwegian participants, be it in the harvesting or the exporting sides, do not have means to affect the swings in supply from other countries.

Another set of factors that are expected to affect the demand for Norwegian scallops are macroeconomic forces in the American society. Scallops are without doubt a luxury product and a restaurant product. As such the demand for scallops will be sensitive to swings in the national economy in USA. Weakened or negative economic growth in the US, or a further fall in the value of the dollar can be expected to have a negative effect on the demand for scallops, including Norwegian scallops. Similarly, a strengthened American economy will have a positive effect on demand.

We have seen through the analysis that both these sets of key factors probably will have a negative development in the short term (out 1988). In the short term it therefore appears that the negative market situation that developed in 1987 will remain.

These factors are as mentioned to be considered as a conditional framework for the Norwegian scallop industry. Swings in landings in other countries, and swings in the American economy will be part of reality also in the future. The effects of the swings can, however, be affected, and the general objectives for a marketing strategy towards the US market is to

strengthen the demand for Norwegian scallops in such a way that Norwegian exports become less vulnerable to swings in supplies from other countries and the economic situation in the US, as it is today.

The analytical work done strongly indicates that Norwegian scallops today are extremely vulnerable to competition on the American market. The reasons for this will be briefly summarized.

First,it appears that a large part of the Norwegian (p.71) scallop exports today is sold to processors that use scallops as raw material for breaded products .

Second, Norwegian scallops are being evaluated as low quality products in large parts of the American market. These two factors together means that Norwegian scallops have not built up the willingness to pay and buyer loyalty that create stable and high prices in the market.

Somewhat simplified, the American market can be divided into two parts that are considerably different from each other seen from the interests of a producer and marketer. On the one side there is a market for breaded scallops. This market is characterized by strong competition between the suppliers and a price sensitive buyer base. Therefore, the opportunities for getting good prices in this market is limited.

On the other side is the restaurant market for scallop meats in themselves. This market is complicated both with respect to competitive intensity between suppliers and willingness to pay by the customers. The part that is most willing to pay well and demand quality is reserved chiefly for the American and Canadian scallop industries. These two industries therefore enjoy a position in the market that makes it possible for them to obtain much higher prices than other suppliers.

We will briefly explore the reasons why these two parts represent substantially different marketing environments for the Norwegian scallop industry. First we will justify the statement that the price sensitivity and competition is much stronger in

the market for breaded products.

With respect to the competitive intensity , this is determined, among others, by the opportunity the buyer has to switch between suppliers. If it is easy for the buyers to switch from one supplier to another from purchase to purchase, this means negotiating strength in the hands of the buyer. The buyers can at any time be played against other so that it creates a downward bidding spiral. The processing plants that produce breaded products are to a much greater degree than the suppliers to the restaurant market in the position that they can switch from supplier to supplier. First, the production process in itself with breading and repacking makes it almost impossible to retain the origin of the raw material. In this market it is to a much lesser degree questioned where the raw material came from than in the market for natural products where each nationality or species have found their relatively permanent place in the quality- and price scale of the buyers. Second, quality (p.72) differences (freshness, color, taste) are masked by the breading which further makes it possible to utilize a wide spectrum of species and origins.

With respect to the price sensitivity it is,in addition to be determined by the factors just mentioned, strongly affected by the opportunities the plants have to pile higher costs on to their customers. Here we will mention two reasons that this cannot be easily done in this market.

First, breaded products are not considered to be very sophisticated products in all markets. Breaded products, either from sole, cod, haddock or other fish species, are products that are consumed at home on a weekday, or in an inexpensive restaurant. Breading in itself therefore signals the occasion when the consumer is not motivated to pay very much for what he is buying. Breaded products should, according to the consumer, be inexpensive.

Second, breaded products are distributed by enterprises that

have a clear low price profile. This applies both within the retail trade, where breaded scallops is a typical supermarket or frozen food center product, as well as in the restaurant trade where low- to medium prized restaurants will be the most important buyer group. Both these types of enterprises base their competitive ability on keeping low prices. The consequence of their strategy is therefore that they are very aware of the costs of all products purchased. High priced products just do not fit into their assortment.

The objective for the marketing efforts of the Norwegian scallop industry in the future should be to get into a position where the product is acknowledged as a quality product. The associated target group should be the more sophisticated parts of the restaurant market. Geographically there are several choices, but the New England region has some signs that makes it especially attractive. In the first place, this region has the highest consumption of restaurant services per capita. Scallops is a typical restaurant product in USA, and high consumption of restaurant services therefore means high turnover through the target group. The region has furthermore one of the highest per capita incomes in USA, and highest per capita consumption of scallops in total. If the industry can get an entry into the restaurant trade in New England, it can also be hoped that attitudes to the product will spread to other regions.

# 16 MARKETING STRATEGIES FOR THE AMERICAN SCALLOP MARKET

We have now clarified some of the circumstances around the market situation for Norwegian scallops. In the last section above we have further defined the objectives for marketing efforts in the future and also the target group for the marketing strategies. In the following we will propose some suggestions for measures the industry can carry out to reach the objective for a higher share of sales aimed at quality restaurants on the American market. A marketing strategy must be assembled from strategies for distribution, product and communication. In the following sections we will present some suggestions for guidelines for choices within these three areas.

## 16.1 Distribution strategy

A complete strategy for future distribution of Norwegian scallops includes two choices:

1) Choice of entry level

and

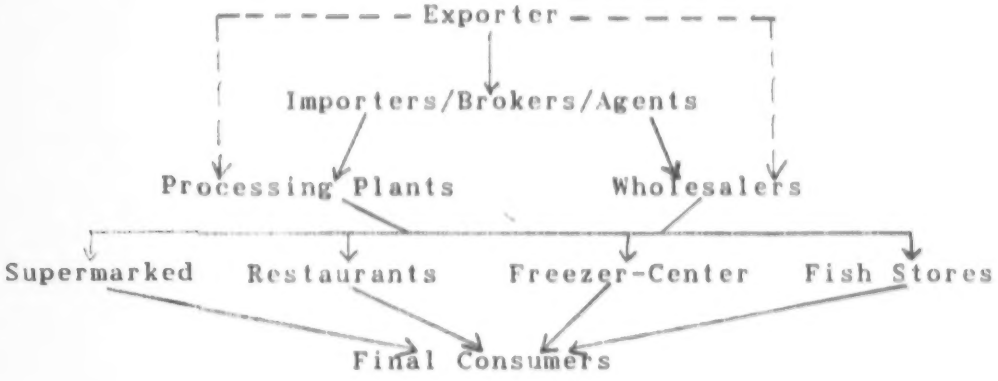
2) Choice of customers for further distribution.

In the following we shall discuss possible alternatives and give our views of which alternatives that in particular appear to be attractive from a Norwegian point of view. As an introductory comment we can mention that even if we do not discuss many of the problems connected with changing distribution channels for the scallop industry, this does not mean that we have neglected them. Choice of distribution channels is a long term decision that will have many consequences for the other marketing activities and for the profitability of the industry in total. These wide ranging consequences are what we will focus on in this section, and it is the value of these that must be weighed against risks, personal efforts and costs connected with winding up existing customer

relations and to replace them with new ones.

1) Choice of entrance level

In evaluating which level in the distribution chain should be aimed at for entry, it would be informative to look at existing alternatives. The distribution chart below shows schematically the links that can be found in the distribution channels for scallops. The unbroken lines show the most common product streams in this system.




The figure shows that the distribution system for scallops consists of 3-4 trading links and the final consumers of the product. This system has a similar structure in USA, France and most European countries. In the further distribution it is assumed that the Norwegian scallop industry is able to unite around a joint marketing strategy. This assumption is not absolute because large single participants can implement a distribution strategy independently of what other, smaller participants are doing in the market. The point is that the turnover must be above a certain level if the actors shall have freedom of action to take on fixed costs in connection with a choice of distribution forms.

At the starting point the Norwegian scallop industry is quite free to choose entrance level in this distribution system.

The strategy in the United States at the present time is distribution through an importer. On the French market the chief strategy is to sell directly to processing concerns. This difference can be easily explained by the fact that in France the target group is processing plants, while the industry does not appear to have a clear target group in the American market. Through the importer the industry counts on reaching all interesting target groups.

In spite of this freedom that the industry has regarding choice of entrance levels, we will discuss advantages and disadvantages of only two alternatives:

A) Entry via importer

and

B) Establishing own import links in the market

The argument for disregarding the other alternatives for this round is first that activity further down in the distribution system requires access to resources other than scallops. Wholesalers are to a large degree based on assortment and market knowledge as competitive factors. This reduces the competitive advantage that a stable supply of scallops leads to.The operation of processing plants, either in the canning or frozen food sector, also requires a higher degree of market knowledge tied to product development, and also processing expertise. Norwegian participants would at the present time be weak competitively both with respect to processing- and market knowledge, and these characteristics are in our opinion more critical in the secondary processing industry than a stable supply of raw materials. Even if we in this round disregard these alternatives, a natural development of the industry further down the road can be the establishment of processing plants as market knowledge is accumulated.

a) Entry via importer.

The advantages of this strategy are most clearly seen in an introductory phase of the history of the scallop industry. First, entry via an importer can be an easy way to gain quick and easy access to large customer groups in a marked. The importer has already established a customer base that can be reached through sales to him. The alternative for the Norwegian industry is to build up a customer network themselves in order to secure sales. This can require considerable resources in the introductory phase, but should not be an impossibility as more experience is gained through the exporting function.

Another advantage is tied to the relatively non-obligatory efforts on a market where exports are introduced. By selling through an existing importer, we can test different markets and pull out without losses if the turnover is not up to expectations. The strategy is "correct" on the secondary market which principally serves as an outlet for surplus production. On such secondary markets the industry will not be well served by taking on the long-term costs associated with the establishment of their own importing links and investment in market relations. What can easily be forgotten in such non-binding sales is that to what extent sales goals in a market are reached depends (p.76) on sales efforts in that market. If a producer/exporter goes in with an established importer in a market and the turnover is low over a period, this can just as well be due to weak sales efforts from the exporters side as weak potential demand in the market. Another mistake that can easily be made in such non-binding efforts is that it takes time to establish a product in the market. If this is not acknowledged, one may pull out too soon from a potentially important market. A deliberate marketing strategy with an associated marketing plan is a good instrument to become aware of what is required to reach turnover goals in a marked.

The disadvantages of entry via an independent importer are in our opinion tied to lack of control of the marketing of the products. The consequences of this lack of control are perhaps becoming most apparent if they are tied to requirements for implementing a marketing plan. As we have seen, important elements in the marketing strategy are choice of target groups and coordinated availability and marketing initiatives. If one goes on to make an investment in working on final user groups, it is necessary to ensure that the product is available for the target groups. An independent importing enterprise will at any time sell the products to the segments of the market that are most willing to pay at the moment. These parts of the market will not necessarily coincide with the target groups for a Norwegian marketing strategy for scallops. By having control over the importing function themselves, the scallop industry will have a better control over selling the products to the parts of the market that are most attractive in the long term.

B) Establishing own import links in the market.

Another important advantage in establishing their own import links lies in the continuous cultivation of the links after the importing link. The sales of seafood are characterized by each enterprise dealing with a number of different products. The analysis of the product lines for typical French scallop importers showed that the average company could sell over 100 different products. Some enterprises have a product spectrum of several hundred different variants. A consequence of this is that the companies will at any time use their limited marketing resources on products that give a high contribution to profits. In periods with slow sales this can lead to the marketing of scallops being given a lower priority than the products that at that time yield the best returns. Establishment of own importing

links will secure market cultivation and availability also in periods with difficult market conditions.

In addition to these long-term effects of the entry strategy in the markets there is the question of a cost side and an income side. The costs are associated with the expenses connected with the establishment of an office abroad. If the functions performed are limited to sales work with wholesalers and processors, the fixed costs will be salary and communication expenses for a person with or without a secretary, rental of facilities and some start-up costs. On the income side one can assume that importer fees of roughly 2-5% of sales will accrue to the office. The following example of a calculation can illustrate the profitability of an sales office like this as a function of sales:

Assumptions: Average price = 40 kr/kg
Gross profit = 3 & 4 % of sales

| | 4% | 3% |
|---|---|---|
| Sales volume ( tonnes/year) | Profit (kr/yr) | Profit(kr/yr) |
| 500 | 800,000 | 600,000 |
| 1000 | 1,600,000 | 1,200,000 |
| 1500 | 2,400,000 | 1,800,000 |
| 2000 | 3,200,000 | 2,400,000 |

The total profit gives a picture of the additional income in the short term connected with the establishment of their own import office. The long term effects of better control and management of market cultivation efforts are more difficult to quantify, but it is important to realize that these effects come as an extra "bonus" and can add up to much more than the pure import profits. The estimated rate of profit in the figure above is considered to be relatively conservative. In some cases importers in the U.S. market are operating with a profit rate of

up to 10%.

There are two reasons that we have estimated a lower rate . First, the rate varies from shipment to shipment, and we believe that an average gross profit rate of 3-4% over time gives a correct picture of the margins for imports of fish products. Second, the rate is negotiated when prices are agreed to both in the raw material market and in the product market. If an importing enterprise is owned by vessel owners or exporters in Norway, it would be without purpose for this unit to maximize profits by reducing the purchase prices. The effort must be directed towards maximizing the selling price to the market, and this reduces the opportunities for realizing high margins.

The table above indicates that the break-even point (p.78) for an import office like this is around 1000 t scallops a year. Requirements for turnover volume is therefore ca 1000 t /yr as shown in the following rough calculation:

| | |
|---|---|
| Salary sales manager incl. social costs | kr. 500,000 |
| Travel budget | " 150,000 |
| Telephone/Telex/Fax | " 75,000 |
| Office lease | " 150,000 |
| Line of credit | " 150,000 |
| Warehouse rent/ Miscellaneous | " 150,000 |
| Total costs | Kr 1,175,000 |

At the present time it is only the American market that receives large enough quantities to justify a new establishment like this if one looks narrowly at the short term income increase. Other markets can be considered if one operates within a longer time period. A new establishment in France could be justified if the objective was to increase exports to this market to > 1000 t over a 2-3 year period.

If an establishment in France is considered to be an European office for covering France, Belgium, Spain and Italy (and perhaps West Germany), the total export volume can easier reach the break even point.

Another model can be to increase the sales volume by taking in other products than scallops in the product selection. Frozen shrimps and fresh or frozen salmon are the products that in our opinion are closest to scallops considering the target groups in the market. By selling salmon and shrimp in addition to scallops it would be easier to reach the necessary sales volume to defend the establishment of an import office both in Europe and USA.
A factor to consider if a strategy like this is chosen is that the office must be competitive on the terms of the market also when selling products other than scallops. The comparative advantage in secured supplies of products and opportunities for managing the production from demand considerations no longer exists. This requires that the operation of the import- and sales function occurs on the same businesslike basis as those of the competitors with respect to operating costs, quality of the purchasing function, transportation solutions, financing and sales functions. Certain large scale advantages can still follow from the basic activity (scallops) through cheaper (p.79)
and more regular transportation and that the customer portfolios coincide.

## 2. Choice of customers for further distribution

Choice of customers for further distribution towards the final consumer market is partly a result of the strategy chosen with respect to the entrance level in the market, but this only applies to which level the customers are at. If sales via an importer is chosen as the entrance level, individual enterprises must be chosen from several hundred possible (on the US marked).

By choosing to establish their own import links, the producer/exporter must choose to which wholesale companies and processing enterprises the products are to be sold to. On the American market there are several thousand possible customers in these catagories. In France there are 500-1000. It is therefore obvious that it is not necessary to have as an objective to service all these customers. A selection of these should be chosen, and it is then decisive that chance will not determine how the customer portfolio is assembled. In order to choose, it is necessary to have clear criteria. In the choice of customer contracts for resale of scallops we believe it is especially important to emphasize the following three chief criteria:

1) Best possible coverage of the chosen target group on the final consumer level.

2) Conformity between the customer's quality profile and desired position in the market,

and

3) Ability and will to participate in marketing initiatives in cooperation with the Norwegian scallop industry.

These are factors that are strategically important for reaching the objectives for a new position in the American scallop market. In addition to this there will of course be the regular business requirements for payment rating and willingness to pay.

Those that know the international fishing industry knows that even if customer loyalty can be fickle and that there is much trading across more lasting customer relationships, each individual business has a relatively stable set of suppliers and customers , and most of their trade is conducted with these. The company has invested in these relations through directed personal contact work, business lunches etc. The goals for these investments are to reduce costs in future transactions. The existence of these reasonably stable customer portfolios (p.80)

have clear consequences for the distribution strategy of the scallop industry. A criterium for choice of customers is that the customers included for further evaluation have a well established network of customers in the high end of the restaurant market in New England. It cannot be demanded that all customers only service this market segment. A more realistic objective in practice is to ensure that an appreciable part of the customers have this type of restaurant as a substantial part of their customer base.

The next criterium will in practice fall quite close together with the first regarding the choice of possible customers for further evaluation. That a concern to a certain extent has specialized on servicing the high end of the restaurant market will normally require a high quality strategy, but also here there can be nuances. The ideal guideline for choosing between many possible customers in this category is therefore to prefer customers that can document an explicit quality strategy and who de facto has a good quality reputation in the market.

The importance of the last criterium, ability and willingness to participate in market development initiatives, is somewhat dependent of how far the industry will go in concentrating on market development and how this work is organized. Weak marketing efforts in the future means by implication that this criterium will have less importance. However, if a concentrated effort is undertaken on various measures to build a quality profile and stimulate demand, it becomes desirable to have motivated and competent partners that can contribute with market information and that are willing to carry out the marketing initiatives that naturally fall under their area. However, this criterium does not need to be decisive for all customers. It can be decided to choose one customer in each segment that have these characteristics. Concrete evaluation of this question must be made in connection with concrete

marketing measures.

We will finally give some comments on the implementation of a distribution strategy like this. The criteria presented above are strongly tied to our suggestions for choice of target groups and to the suggested objectives to position the product higher on the quality ladder. These are long term objectives that cannot be reached in the short term under any circumstances. Some uncertainty also remains with respect to how far one can succeed in penetrating this part of the market. Perhaps it is unrealistic to count on 100% of the Norwegian scallop production going into this segment. A more realistic objective is probably that an increasing part of the production is sold into the high end of the restaurant segment. The industry must also have a market basis <u>during</u> the implementation of this strategy. A realistic situation in the future is that x % is still sold to breading concerns while y % is sold to the restaurant market. The guidelines for choice of distribution partners refer to the implementation of a strategy aimed at the restaurant market. It is obvious that the industry also needs customers that are well established in the breading market. However, this segment is not the main focus for this strategy plan. Some of the principles illustrated above can still be used in the choice of customers in the market for breaded scallops. Some of the same differences in quality profile, customer base and supplier requirements can also be found in this segment. These differences can be used to choose customers that conforms with the genetic strategy for the restaurant market.

One aspect of the implementation of our proposal for a distribution strategy is the survey of possible customers. In other words, how shall Norwegian exporters obtain information on characteristics of individual companies on the markets they have chosen to concentrate their efforts on? As discussed above, a considerable amount of information on the company or concern level is necessary in order to be able to compare and assess

individual customers. Even if it is not easy to obtain precise information on all possible distributors of scallops in the market being cultivated, it is possible to get an impression of to which degree desirable market segments are found in the customer portfolio through contacts with the individual concerns, and also if the concerns have the desirable quality profile. The information that emerges from direct contact with the individual concerns can be supplemented by other market participants. Willingness to participate in marketing initiatives can be discussed at a later occasion with the concerns that fill the minimum requirements for market coverage and quality profile.

## 16.2 Product strategy

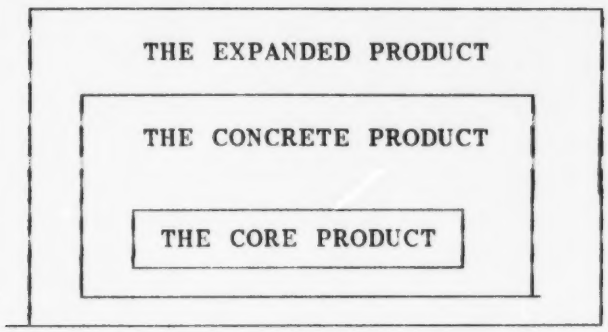
We have proposed in the previous sections that the Norwegian scallop industry should aim at selling a larger part of their production to the higher paying part of the restaurant market. All markets, both the European and the American markets, contain this segment. As mentioned above, strict quality requirements follow a strategy like that. If the industry is to achieve a breakthrough into this target group, it is therefore necessary that all participants do their utmost to fill such an ambitious strategy with substance. Substance here means that all actors and the industry collectively raise the quality of the product where this is possible. The analysis below is an attempt to clarify in which areas quality improvements can be achieved. We have attempted to be as concrete as possible, but further investigations with respect to what is technically and economically possible must of course be carried out before (p.82) quality improving measures are implemented. The proposed changes can, in isolation, appear to be unimportant, but the point is that if one is to succeed with the proposed strategy, it is important that all efforts are made to achieve improvements. The

hope is that the sum of possible improvements will give us competitive advantages in trade with the targeted group.

Like most seafood products, scallops have the property that many of the characteristic features are determined by biological factors in the raw material. The size of the muscle cannot be affected by the industry and is fixed biologically. The same applies to a large extent to taste and color. In addition, current processing methods are limiting the form of the product. The Norwegian scallop industry is meeting resistance in a large part of the French market because they are not able to supply a product with gonads. In spite of these limitations the industry has opportunities to make adjustments, adaptations and changes to the product so that the final form to a greater extent is adapted to, and makes the implementation easier of, a marketing strategy like outlined above.

In our view, the industry has a tendency to define the product somewhat narrowly. In discussions on product improvements, the focus is often exclusively on the core product, i.e. the scallop muscle in itself. The objective characteristics of the product such as size, color, flavor and degree of freshness are important parameters in the evaluation of Norwegian scallops by the customer, but there are no doubt also other factors. The factors that can be influenced by the industry are given weight by the buyers. These can form a further basis for repositioning and breakthrough with the target group.

For clarity we can divide the characteristics of scallops in three parts as shown in the figure below:




The core product encompasses the objective characteristics of the scallop muscle itself which are important enough. However, characteristics of the concrete product and the expanded product are also given weight by the buyers and can be arranged in a way that supports the objectives of the marketing strategy. Important factors in the **concrete product** are:

- Packaging
- Trade name (Labeling)

And important elements of the expanded product are delivery conditions and -methods, and conditions of payment.

In the following we will discuss which adjustments can be made to the elements in the three levels of the product

## A. The Core Product

Through the marketing analysis we have surveyed the most important sides of the core product that are emphasized by the buyers. These characteristics are as follows:

- Size
- Flavor
- Color

- Freshness
- Grading (by size)
- Glazing

There is little the industry can do about the size of the scallops. The size composition of the catch is given with some variation through the year and over time. The experience in other countries ( for example Iceland) is that the average size of the meats in the catches goes down after the stocks have been exploited for some time. A possible strategy for affecting the sizes offered can be to offer only certain sizes to the target group and then sell the smaller size categories to other parts of the market for use in processed products. There is no doubt that some of the quality evaluation of scallops is tied to the size of the muscle. To reserve the largest sizes for the target group can contribute to forming a basis for the marketing strategy.

The flavor of the scallops is similarly given biologically. Certain changes in flavor can occur during fresh storage. For example, it has been reported that sea frozen fillets of cod and haddock are difficult to tell apart from taste only. The reason for this is that fish goes through a ripening period the first few hours after death, and that this ripening process contributes to the flavor that characterizes each fish species. Through rapid freezing this process is stopped at such an early stage that it gives little contribution to the flavor. A possible way for the industry to go would be to carry out controlled storage experiments followed by sensory analysis. The taste panel must then consist of individuals that are representative for the target group. This means that the sensory analyses must take place abroad. In that way it can be made clear if there are flavor changes taking place during the ripening process that makes the product conform more to market preferences. Information from such trials can in the next round be used in the processing stage by keeping the scallops in intermediate storage for a

period before freezing if this is technically feasible.

We have seen through the analytical work carried out that the color of the muscle seems to be the product characteristic that lowers the overall evaluation of Norwegian scallops in the American market. Simular to flavor and size, the color of the muscle is biologically given before the scallops come onboard the vessel. As for flavor and size, the color is still an important property that contributes to the positioning in the market with the strategic implications this has. There is therefore a large profit potential by evading the color problem in one way or another. We will discuss two aspects of the color problem.

The one component the off colors are associated with is the pigmentation of the scallop muscle. As the production process is today, there are no changes in the pigmentation during the process. We can propose two possible avenues to attempt to reduce the marketing effects of the off color. Firstly, technology for sorting by color has been developed in other segments of the food industry . It would be a considerable advantage if the most off-colored meats could be sorted out. The market operates with three categories of scallops :white, off-white and yellow. We are of the impression that most of the resistance to Norwegian products is associated with the occurrence of yellow meats mixed in the product. If it would be possible to grade out those categorized as yellow, it would be much easier to achieve acceptance as a quality product in the market. Both on the American and the French markets there are customer categories that from their method of utilization of the product pay less attention to off colors. This applies to the breading processors in USA and the canneries in France. One way to go for the industry would therefore be to investigate if color sorting onboard or (p.85) ashore is economically and technically feasible with the processes used today.

Another avenue to get around the problem of pigmentation in scallops, would be to seek out expertise that would be able to

study if it would be possible to alter the pigmentation either chemically or mechanically.

The other aspect of off colors in scallops is tied to the coagulation of proteins on the surface of the muscle. This coagulation takes place when the scallop shells are opened by the use of heat shock. The smaller shells are especially subject to this problem. The market also considers this coagulation as an off color. A serious side of this problem is that rumors are circulating on the American market that the coagulation is due to chemical treatment during processing. Rumors like this can be very damaging if the objective is to establish Norwegian scallops as a quality product in this market. It would therefore be strategically important for the industry to modify or change the process so that the amount of coagulated muscle is reduced. If color sorting equipment is introduced, this type of off color can be kept away from the target group.

Freshness is perhaps the strongest side of the Norwegian product. It takes less than one hour between emptying the rake and freezing of the scallop muscle. No improvements can be made to this characteristic.

Size grading of the muscle does not seem to be a problem in the industry at the present time. A possible potential for improvements can be in finding out if the target group has ideal size grades that today are not industry standards. If changes are to be introduced in the size categories, be it smaller intervals, greater intervals or other intervals, it must be documented in advance that these changes will result in obvious advantages for the target group.

Glazing is a large problem within the scallop industry. It is in particular Japanese scallops that have had their reputation in the market damaged due to overglazing. Over a period of two years or so Japanese scallops have had a much weaker quality profile in both the American and French markets because of this. Norwegian scallops have recently been given a high score for

their glazing.However, it is necessary to point out that it is the importers that give this high score. We know that the principal activity of many of these importers is repacking and reglazing the products. Even if the product has a minimal glazing percentage when shipped from Norway, they could have a high percentage when sold to a restaurant. High glazing pulls the total evaluation of the product down. If there is not enough control with the glazing in products going to the target (p.86) group, this can make a repositioning in the market difficult. One way to ensure that there is control is to carry out the imports ourselves as argued in the last section.

## 2. The Concrete Product

Important elements of the expanded product is, as mentioned above, the packaging of scallops and the use of trade names, if applicable.

The importance of packaging will easily move to the background in sales to an importer. Importing concerns are quite "omnivorous" with regard to packaging, both because they can re-sell different packages to various customers, and they repack products that are packed in bulk at arrival. In the implementation of a marketing strategy, the industry cannot any longer allow themselves to forget the problem area of packaging. A clearly defined target group will at the same time mean definite requirements for packaging the products. In our opinion, packaging is especially important in the sale of raw materials like scallops since it is one of the few areas where the industry can differentiate themselves from other suppliers.

The problem area of packaging also has two aspects. The package size must first be considered. The industry standard for exports of scallops is 5 pound packages. This package size is relatively well suited to the requirements for an average

restaurant. However, it could be a potential advantage in analyzing which other package sizes that could be in demand. With the large variation in size and serving frequency among restaurants, there can be no doubt that the different restaurants will have different ideal sizes of packages. A study like that can form the basis for developing a line of different sizes if it is concluded that there is a marketing basis for such a strategy.

Secondly the industry must decide on type and shape of the packaging. There are opportunities for choices also here. The guidelines for choice must be that the packages signify quality through the choice of materials, colors and illustrations.

The industry choices for packaging are in our opinion closely tied to the choice of developing brand names for Norwegian scallops. As in the case of packaging, this decision is being pushed into the background because the industry up to now has only had direct contact with importers and neglected the problems associated with further marketing to the final consumer. Through sales to importers it can (perhaps) be assumed that the customer knows the characteristics of Norwegian scallops (p.87) without taking in use other methods. The fact is , however, that a large part of the distribution system for seafood in USA and France has never had any direct contact with Norwegian scallops. This problem becomes even more important when attempts are made to stimulate the demand for scallops in restaurants. Scallops will be a small budget item for buyers for restaurants. We know that the energy used to study purchasing alternatives is dependent on the size of the purchase and we therefore have no guarantee that Norwegian scallops will get a fair judgement vs. other alternatives. It is therefore first necessary to inform about the existence of the product and in the next instance make it recognizable. It is in this recognition phase that it is important with support from a brand name. If the strategy is successful, the brand name will assist in building customer loyalty and thereby give protection against competition. Another

advantage that can be exploited if one chooses to use a brand name is that it makes it possible to differentiate between the different customer categories in the market. A natural way to go is to operate with a trade name directed towards the primary target group, the restaurants, and another for the breading and retail markets. In this way one can reduce the possibilities of having products graded for the breading market being associated with Norwegian scallops in general.

Another couple of considerations can be mentioned in connection with the decision to develop brand names. First, the industry would be able to take advantage of large-scale economics in marketing if they can agree on one name instead of all vessels having their own brand name. All marketing efforts can then be concentrated in building up one brand instead of spreading the investment over a number of brands that probably would not be able to create the necessary attention. Eventually some of the marketing efforts can be set aside for generic marketing of one brand, and the other funds used by each processor to differentiate themselves under this umbrella if there are good arguments for this.

Secondly, concentrating on one brand can ease the repositioning of Norwegian scallops. With respect to the position in the market, Norwegian scallops have had a poor start. Norwegian scallops are associated with poor quality, also by buyers that have never tried the product. By "re-launching" the product under a new name where the country of origin could perhaps be kept at a low key in the beginning, the negative associations to Norwegian scallops could be avoided and therefore also the difficulty of accepting them as a high quality product.

product as one of the supporting elements, and they can invest in learning to prepare various dishes with this raw material as basis. The marketing success of the Norwegian aquaculture industry is often ascribed to the ability to service the market the year around. The Norwegian scallop industry is less seasonally based than many of the other suppliers. As we have seen in the analysis, most scallop producers have closures in parts of the year. This is a competitive advantage that could be exploited. Along this line, it would be a sensible strategy to priorize the target group in periods with lower production. This can be done through intentions or through delivery guarantees (for instance the shrimp industry's agreement with Gorton's/MacDonald's).

## 16.3 Communication strategy

In a recent talk it was mentioned that it must no longer be kept secret that Norwegian scallops have a number of good features compared with competing scallop variants.

This point illustrates a misunderstanding that often becomes fixed, namely that the market knows the product. What is the case in most situations is that the buyers have not heard of the product, and those that have heard about it do not know its characteristics. These are conditions that results in what the industry registers as weak demand. The problem is perhaps most noticeable on the European market, but also in the United States are Norwegian scallops an unknown product for broad groups in the market. In our studies of American wholesalers and importers, it was found that most of them had never had direct contact with the product. They still "knew" that the quality was low. There is no objective that states that all market participants shall know the product. The Norwegian production of scallops is still too low for having a strategy saying that all potential customers should

be serviced. What is important, however, is that the target group get to know the product and especially the characteristics (p.89) of the product that gives the Norwegian industry advantages relative to other suppliers. In today's market situation it can not be assumed that restaurants within the target group will try and evaluate Norwegian scallops on their own initiative. The flood of product offerings is so great that only products that will be given attention by the potential buyers will be tried. In this connection it can be said that Norwegian scallops are not only competing with other scallop variants, but also with a wide spectrum of foods that all fight for the buyers limited budget. It is in other words up to the producer/exporter to make the buyer aware of the existence of and the properties of the product. This is a rough description of the situation the Norwegian scallop industry is facing in the market place and which forms the background for the last element in the marketing strategy : The Communication Strategy.

A communication strategy , as the other elements in the marketing strategy, takes as its point of origin a chosen target group, strategic objectives and the position of the industry relative to the target group and competitors. The individual components in the communication strategy are choice of the basis for the message and choice of medium or channel for communicating the message.

The target group for the communication strategy is the high end of the restaurant segment. The strategic objective is to reposition Norwegian scallops as a quality product in the markets, equal to , for instance, American or Canadian scallops. These are the means for achieving a better breakthrough in the target group. The positioning in relation to competing products is made with basis in the strong sides that the Norwegian scallop industry have relative to these products.

In marketing communication it has been usual to divide the reactions of the target group into an effect hierarchy. This is illustrated in the figure below:

1. AWARENESS OF THE PRODUCT

2. KNOWLEDGE OF THE PRODUCT

3. PREFERENCES TOWARDS THE PRODUCT

4. PURCHASE OF THE PRODUCT

Figure 27 Response/effect hierarchy in marketing communication

According to the theory an individual or organization (p.90) in the target group must pass through stages 1-3 before a purchase can be made. This can appear obvious, but a model like this is useful in the formation of a marketing strategy since each of the levels in the hierarchy can be objectives or goals for the strategy. It would be natural for the scallop industry to have as an objective to create attention to the product and also knowledge of its characteristics in such a way that attitudes and preferences are changed in its favor.The logic is then that changes in purchasing attitudes occur more or less by themselves.

## 1. The basis for the message.

The industry themselves must know where they stand regarding the basis for the message. The concrete shaping of the message can then be left to professional bureaus or consultants. However, one should not anticipate and hire advertising consultants before

the objectives of the effort have been reasonably well defined. The basis is based on the characteristics of (the expanded product) that is known to be given some weight by the buyers. In the following we will give some examples for arguments that a communication strategy can be built around. The figure below illustrates the effect that is being sought through communication with the target group.

The starting position is a situation where the market has relatively weak knowledge of the product and where the attitudes to the product are negative. This knowledge and these attitudes refer to the target group, i.e. the high end of the restaurant segment (in the New England region).

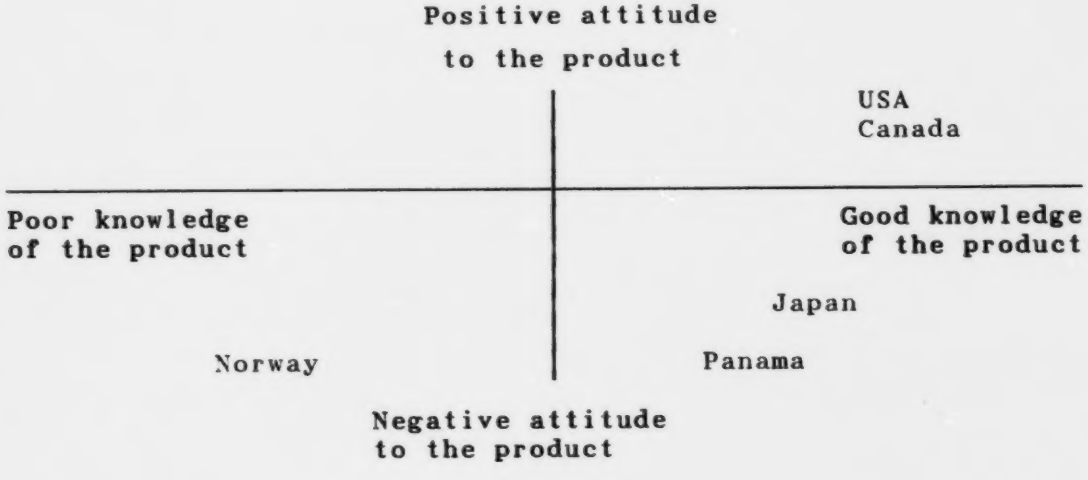



Figure 28 Knowledge- and attitude diagram for scallops.

As illustrated in the figure, Norwegian scallops are (p.91) relatively poorly known in the market and has a weak quality reputation. The objective of the communication strategy is to create a movement in the direction of USA/Canada which both have products that are well known and are in good demand in the

market. The effect of a movement like that will be higher and more stable prices for the product.

Freshness is a non debatable advantage of the Norwegian production process compared with most other supplying countries. Scallops from USA and Canada are ranked highest for product quality among American wholesalers and importers. The products from these countries are stored on ice for 10-11 days onboard the vessels before being landed, packaged and marketed fresh or frozen. For scallops that are distributed fresh, the total storage time on ice will be around 14 days before they reach the consumer or restaurant. In this period the product would have been subject to quality changes. The current market does not seem to be aware of this process. A basis for communication on Norwegian scallops would without doubt be the Norwegian production process and the short time that elapses from the time the rake is emptied until the product is in frozen storage onboard the vessels. It is our impression that these differences are not valued highly enough by the market. By managing to reach those responsible for purchasing in the restaurants with information on the Norwegian production process where emphasis is placed on freshness, and that it is a natural process without additives of any kind, it is our opinion that this could contribute to changing the attitudes to the product. A side effect of a campaign to bring out the freshness of the product would be that the target group achieves a better knowledge of the existence of the product.

Another point that can be exploited in the future communication with the target group is the low degree of pollution in the harvesting areas. In most markets, both in the U.S. and in Europe, the focus is increasingly on pollution problems and the effect of contaminants on health. Some of the bad effects of pollution are caused by microorganisms and toxic chemicals in foods. Due to low environmental pressure in Norway, it could be easy to underestimate the positive side of an absence

of pollution in the waters where Norwegian scallops are being harvested. Much of the American and Canadian scallop production is harvested in areas relatively close to large population concentrations ( see map over the location of Georges bank and the other harvesting areas). Much of the French and British scallop production is harvested in the British Channel and surrounding areas. The Japanese harvest takes place mostly on the north-east coast of Honshu. All these areas are to a greater or lesser degree exposed to contamination from industries and populations near the harvesting areas. This is in sharp contrast to the Norwegian harvesting areas that are practically (p.92) untouched by pollution problems. Since a large part of the market is occupied with pollution problems and the possible effects on human health, we believe there is a potential benefit to differentiate Norwegian scallops by using this factor.

Besides these two factors, we know that Norwegian scallops have had a good reception with respect to texture, flavor, glazing and water binding ability. These positive characteristics are probably a side effect of the rapid production. These qualities can also be better brought out through communication campaigns with the target group.

A third topic for the message that should be evaluated is the color of Norwegian scallops. The problems associated with the color is not only that the market is used to a whiter shade than that found in many of the Norwegian products. They are also tied to the fact that yellow color is associated with old products, and a coagulated surface is associated (by many market participants) with chemical treatment of the products. Some of the resistance towards Norwegian scallops can be reduced if it can be explained that the yellow color is biologically determined and that chemicals are not used at all in the production process.

## 2. Choice of media.

Two criteria that can be used to choose the suitable media to reach the target group. The chosen media must first have best possible coverage of the actors to be reached by the message. Secondly, the chosen media must have a profile that contributes to emphasizing the message itself. Our proposal for marketing strategy consists in brief to build an exclusive quality profile for Norwegian scallops. This means that also the media chosen must have some of this character.

Topical advertising media would be trade journals for the restaurant trade. There are a number of different ones to choose from in this category (especially in the USA) and each have their own circle of readers. Some would be aimed at the fast food segment. On the other extreme there are journals directed at the established luxury restaurants. The choice of these must be directed towards media that have good coverage of the high end of the restaurant segment.

Other communication channels can be press portfolios (handouts) , attendance at fairs and arrangements aimed at the target group. The Norwegian salmon farming industry have utilized chef competitions and seminars to make the product known and build preferences for Norwegian farmed salmon.

## 3. Some possible organizational forms

Finally in this treatise dealing with marketing strategies for the American market, we will discuss the choices the industry have regarding organization, financing and implementation of the marketing activities. So far any activities to influence the market have been fragmented and un-coordinated. Ten or so

exporters have independently collected information on the markets and the work to affect them. We will not venture to tell the industry the type of organizational model they should choose for the concrete sales work, but we feel that it is not likely that such fragmented behavior is optimal for a more long term strategy in the market. If a quality reputation is to be built for Norwegian scallops, it is necessary that as large a part of the industry as possible follow the same guidelines regarding distribution and product strategy. There are large advantages in scale in this activity, especially in the communication with the market. Another factor is that the effects of the market influencing efforts will benefit all industry participants. It is not very likely that the market in the future will distinguish sharply between product from individual vessels and exporters. For that reason it is reasonable that the whole industry unite on a marketing strategy and fund this jointly through some type of fee on the first hand value or the export value. This fee can be used to finance a position that could be used to look after the more long term cultivation of the market. The pure export function does not have to be centralized within such a model.

Another alternative could be to seek marketing cooperation with other sectors in the fishing industry. The shrimp- and salmon industries overlap in their target groups and partly in their basis for marketing messages with the scallop sector. These three products also belong to the same category from a buyers point of view. Cooperation between these three sectors could increase the financial base, and the level of the influence work can be high enough to benefit all sectors. A more realistic variant of this model would perhaps be that some of the marketing budget for the industry be set aside for coordination with the two other sectors, while the rest of the effort be directed towards the more specific requirements for scallops to achieve a position relative to competing scallop variants.

## 17 STRATEGIES FOR THE EUROPEAN MARKET

In discussing the European market above, we showed that none of the countries (except France) now have any substantial consumption of scallops. Great Britain has a certain consumption of this product but appears to be less interesting as a target group because of its status as a net exporter.

Spain has a local market in Galicia based on a resource in that region. Italy has a limited marked along the Riviera and a certain consumption in the Milan region. This market has its roots in a small local resource on the northwest coast of the Mediterranean sea.

In the other European countries (like Norway, Sweden, Switzerland, West Germany and Finland) scallops occupy a very modest place in diets and on restaurant menus. If these countries are to become important customers of Norwegian scallops, the industry must be prepared to develop the consumption over time by the use of various marketing initiatives.

In our analysis of the Italian and Spanish markets, we estimated the consumption ( based on catch statistics and statements from the importers) to ca. 200 t/yr. The imports in the other countries are not registered as a separate post in the statistics, and the consumption is today probably less than 100 t/yr. However, developments in the shellfish consumption seem to indicate a growing demand for this type of products. This will also apply to scallops which clearly belongs to this product category.

The first choice that must be made in a strategy for the European market is which country should be targeted for entry. Our opinion is here, as mentioned several times before, that most European countries have the potential to become sizable scallop markets. We believe, however, that it would be correct to

concentrate the main effort in one market at a time to achieve the necessary weight in the marketing effort. This means that markets outside the target markets will be treated as secondary markets in the development period, i.e. existing trade can continue to these markets, but the bulk of the marketing budgets will be used on initiatives in the target area. We therefore recommend that the industry unite on one accelerated plan for developing individual markets. In the following we will put forth some arguments for which countries that stand out as the most attractive and can therefore become the first target market.

Spain as a target market?

Most European countries have an affluence level, a population base, a restaurant density and a positive trend in seafood consumption that make them candidates for further efforts. Italy and Spain have in addition the characteristic that shellfish of various kinds have a central place in the diet. Consumers in these countries are furthermore familiar with the fact that sophisticated seafood often is expensive food and especially the seafood available in restaurants. No Italian or Spaniard have objections to seafood dishes belonging to some of the most expensive choices on the restaurant menu. This gives a relative wide choice in pricing of the products. It is neither necessary nor desirable to use price to any large degree as a means to get access to these markets. That Spain and Italy are receptive to "new" seafood products has been proven by the fact that Spain in 2-3 years has become a considerable market for Norwegian salmon.

In choosing between the Italian and the Spanish markets we will point out two features to the advantage of Spain. One is the Italian food laws and the way they are enforced. The Italian Food Inspection have on numerous occasions created problems for the import of food products to Italy. The reports on these problems

are so many that we perceive this as a real threat to problem free exports to this market. It also appears that frozen scallops must be cooked before they are allowed entry into the Italian market. However,this factor must be further investigated before allowing it to determine the next course of action.

The other factor that speak in favor of concentrating on the Spanish market is that Spain has become a much more open market for imported products since entering the EEC. Under the former import regime there were much stricter restrictions on the imports of foods. Within 1992 the Spanish import laws shall be like the other EEC countries. The changes in the import regime has created, and is creating, a growth in the market for imported products. This has further eased the establishment of new products in this market.

A third factor that can be mentioned is that it is expected that there will be a sharply increased demand for frozen foods in Spain in coming years. Changes in sex role patterns and the development of a modern distribution system is about 10 years behind the other North- and Middle European countries. Parallel with the development of supermarket distribution at the expense of traditional commodity trade it is expected that the consumption of frozen foods will increase as seen in Norway and the other European countries.

Further delineation of target groups in Spain.

Among the possible end users, we recommend that the upper end of the restaurant segment becomes the target group also in Spain. The argumentation for this is similar to the one given for the American market. The geographic dimension is important in the Spanish market because the country is smaller and there are fewer population centers than in the U.S. Two regions appear especially attractive if population concentration is used as the

criterium: The Madrid region and the Barcelona region. In addition to these markets being large (Madrid ca. 3.5 million and Barcelona ca. 3 mill. people), they are also easy to reach because there already are transportation routes that can also be used for the transportation of scallops.

A marketing strategy for the Spanish market would have to have the same structure as shown for the American market, i.e. it should contain a distribution strategy, a product strategy, a communication strategy and possibly its own pricing strategy.

In the distribution strategy, the same principles for the choice of buyers as we showed for the USA. The buyers should have good customer coverage in target groups, i.e. the high end of the restaurant market.

The product strategy could be somewhat different since Spain has a very limited experience with scallop products. As general guidelines there should be high quality in all functions such as freshness, grading, glazing, packaging and marketing to achieve a breakthrough. Spain is generally considered to be a demanding market for fish products. The more sophisticated restaurants will in particular demand high quality. The point is that since the Spanish market has not established firm standards as to flavor, color, size or with or without gonads ( at least to a lesser extent than the established markets in USA and France), a directed effort from Norway could contribute to establishing firm industry standards for scallops. The ideal effect would be that Norwegian scallops achieve a standard that the other variants could be evaluated against.

This would also have an effect on the communication strategy since it is not necessary to relate Norwegian scallops to other scallop variants in forming the message. Argumentation can be chosen without to the same extent having as objective a positioning in relation to,for example,Japanese scallops that as of today have low sales on the Spanish market.

With respect to price, the Spanish restaurant market (p.97)

has shown willingness to pay for other seafood products. High price is associated with exclusiveness and high quality. Low price is often associated with the opposite. It is therefore important that price is not used unrestrained as a means in the establishing phase. This might give the product a profile that does not appeal to the target group.

## 18 FUTURE PERSPECTIVES FOR SCALLOP MARKETS

The Norwegian scallop industry has been through a serious market crisis which has had fatal results for several of the pioneers in this sector. Several owners have declared bankruptcy or are negotiating with creditors and banks. After a long period with marketing problems, a contract was signed with a French supermarket chain in March 1988, and a new cautious optimism seems to be apparent in the industry. Aiming at the French supermarket segment was not in line with our proposals for marketing strategies, but we have a full understanding of that "the cow must live while the grass is growing". Uncertainty with regard to the future marketing situation is not by far eliminated as a result of this deal. We will therefore dare to present our views on the future prospects of the scallop markets.

The theme that we have attempted to follow throughout this project work and this report is that the future market situation to a large extent is dependent on what the industry themselves are doing to create demand for their products. When a member is in the middle of the daily problems with customers that are not showing any interest in buying, and will not by far accept prices that are necessary to achieve a balance, it is easy to despair

and conclude that the market situation is decided by factors that he has no control over. We are not at all disagreeing that the market situation is affected by factors outside the control of the industry. Swings in the production in other countries will also be part of the picture in the future. Our message has been that the effects of these swings can be lessened through a number of long term measures that the industry can implement. The essential point is therefore if the industry themselves believes that it will have any effect to work on and develop the markets along the guidelines proposed in this report. If the industry does not believe in the effects of marketing over a 2-3 year period, they have fewer and fewer fellow believers in the industry in general.

Scallops is a product that can easily enter as an ingredient into a number of European kitchen traditions. The product can be used as a first course, as the main dish or entree, in salads and soups. This flexibility and many uses , together with a strong seafood market in the European countries, means that we consider the future to be bright for developing new markets for this product.

Norwegian scallops also have a number of objective characteristics that makes them competitive with other scallop variants on the market. If we can reach the market with information on these characteristics, we can also look optimistically at the opportunities for establishing the product in the more attractive parts of the American market.

To further explain what benefits we hope the industry (p.99) can expect to gain from our proposals for marketing strategies, let us make some comments to the figure below:

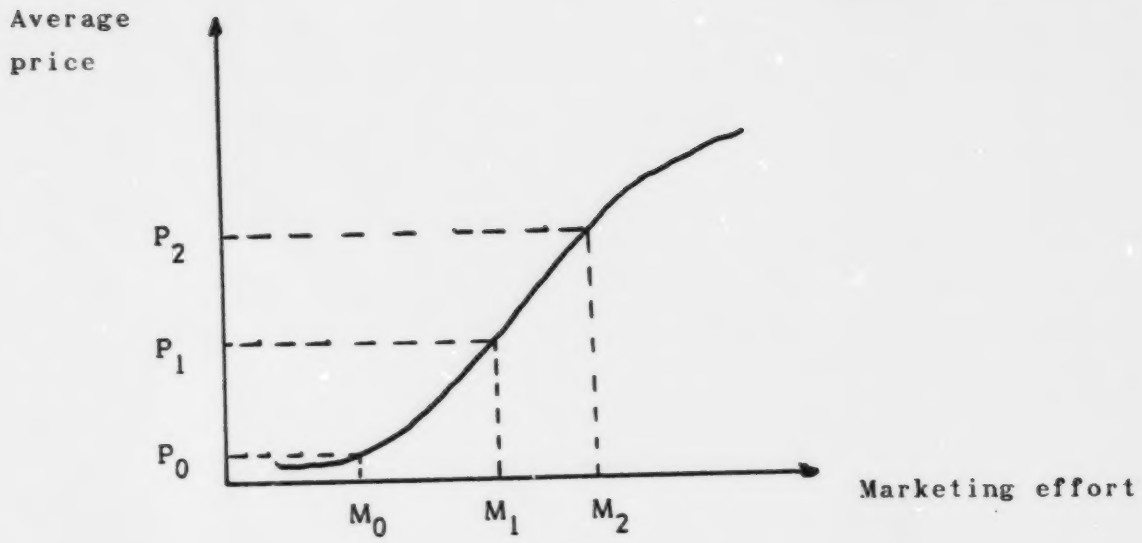



Figure 29 Response curve average price/marketing effort.

The figure shows a so-called response function for the marketing activities for a concern or an industry. The figure illustrates how the average prices depend on the marketing effort.

The essence of the figure appears at the minimum level for the average prices (corresponds to 0 in marketing budget), the maximum level (infinite marketing budget) and the form of the function. The figure is based on a number of research studies aimed at evaluating marketing programs and is assumed to have general applicability.

Along the horizontal axis we have placed the total marketing expenses for the industry. This value comprises the advertising budget (analyses, development of message, illustrations, printing, purchase of media space etc.), effort associated with reconfiguration of distribution channels, work on (servicing) trade links (market visits etc.), alterations to the product and

packaging etc.

Several of these components are difficult to quantify, but they can be used as a checklist to estimate changes in the marketing budget of the industry.

The starting point for the industry is illustrated by point $M_0$ in the figure. An average price of $P_0$ is associated with this point. The location of this point is arbitrary, but is meant to indicate that the industry today can be characterized as being undermarketed. The important point here is that a relatively strong response can be expected for an increase in marketing efforts from a low base point (the curve for average price is rising rapidly with the marketing effort in this area).

However, the figure also illustrates another point, namely that the budget must go over a certain level before the effect is noticeable (illustrated by $M_1$ and $M_2$ in the figure).

What can we then tell from this about the future prospects fo the scallop markets?

This question brings us back to one of the opening chapters in this report : the competitive forces in the scallop markets.

In this section we pointed out several forces that collectively determine the price level for scallops. In the figure below we have assembled these forces together with the response function .

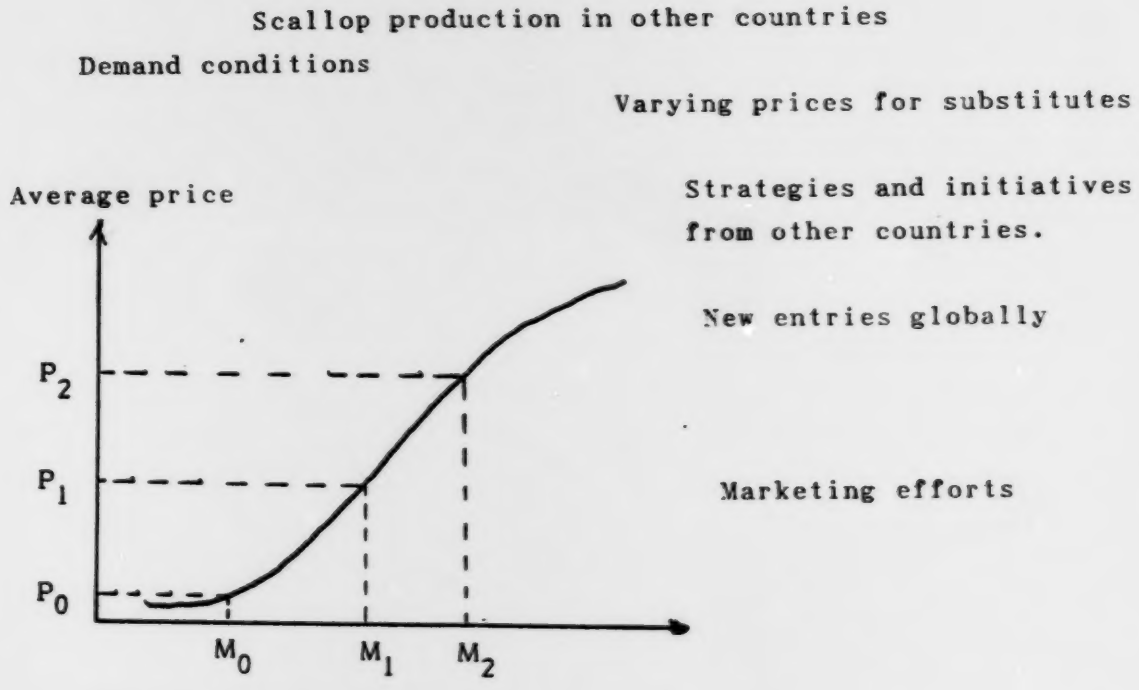



Figure 30 Competitive forces and response function for the scallop industry

These forces will continue to have an effect in the scallop markets. The average price that is obtained at any time is a result of the net effect of these forces collectively. In the section on future scenarios we discussed the effect that changes in these factors could have on the scallop markets.

In a long time perspective , nobody can predict the level of all these competitive forces. There is nothing that indicates that reliable projections can be made for these forces in the foreseeable future. Therefore, nobody can predict if average prices will go up or down in the future and still expect to be believed.

The strongest statement we will make is that directing the efforts of the whole industry, as we have outlined in this report, will mean that the industry will in total be better off than if no concerted marketing effort is made. Our hope is that this report has clarified some central factors of the scallop markets and given ideas that can form the basis for future marketing efforts.

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